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Original Communications.

ARTICLE I. — *Upon Certain Mechanical Means of Restoring a Retroverted Uterus.* By H. WEBSTER JONES, A.M., M.D., Accoucheur to Cook County Hospital, Chicago.

It has been insisted by the writer, in a previous paper, that every artificial support for the uterus should harmonize with nature's laws; conduce to, rather than hinder, the propagation of species, and be entirely compatible with the bodily and mental comfort of the wearer.

Success depends upon an approximation to these ends, because,

First, Any contrivance which is not based upon exact anatomical knowledge, or which is applied without special investigation of the pathology of the case, is far more likely to do harm than good. And it is due to the lamentable failure of many in these essentials, that the very name of pessary has for years been odious, and that the disorders for the relief of which the instrument was used, have been truly the *opprobria medici*.

Second, Elevators of the womb which *fully* occupy the vagina, and thus hinder the marital relation, are rarely tolerated for a

sufficient period to insure even a degree of improvement. Frequent removal and replacement, for any purpose, is oftentimes undesirable, and patients are rarely taught to perform this office for themselves.

Third, A pessary which constantly suggests itself to the wearer, either by its unphilosophical construction, or by its requiring external strapping or bandages for its own support, has the disadvantage of substituting, in its best estate, an artificial and moral anomaly for an inbred and physical evil. The first element of success in dealing with the female organism, is the diversion of the mind from morbid channels, and that physician defeats his own ends who offers his patient a constant reminder of her weakness.

In brief, then, a pessary should possess a *general adaptation* to the anatomy of the parts; a *fitness* to the peculiarities of the case; *no need of frequent removal*; *non-interference* with coition, and a *self-supporting* and *retentive power*, devoid of bandage or external appliance.

It is a curious study, to view in the light of these principles, the vast array of instruments which have been proposed as uterine supports. If necessity be indeed the mother of art, it is abundantly evident that, for ages, physicians have appreciated both the cause of woman's suffering, and the difficulty of relieving it.

Without attempting a history of these inventions, it is proper to consider them as comprised within four classes:

1st. Those intended for adjustment *anterior* to the *cervix uteri*.

2nd. Those intended to apply power *more directly* to the cervix, by means of a cup or ring embracing it, and dependent upon *exterior* means for their own support.

3rd. The intra-uterine stem pessaries, which act upon the entire uterine cavity, and are supported from without.

4th. The instruments which *elevate* or *retract* the cervix by pressure applied behind it, in the vaginal *cul-de-sac*.

After what has been said, it will be apparent that many and grave objections to the use of most of the pessaries now in vogue, may be properly urged.

All instruments of the *first class* mentioned, are open to the charge of non-conformity to the anatomy of the parts. In order

to a cervico-pubic distance of two inches and a half (*vide* JOURNAL, January, 1870,) the globular pessary of Dr. Physick needs a diameter of that extent. This renders its introduction and removal difficult. The colpeurynter of Dr. Garriel is an improvement, but both distend the vagina unnaturally, and rest heavily upon the rectum and urethra, while the latter has a disagreeable appendage in its tube and stop-cock, with regard to the security of which the most courageous patient has many a doubt. Moreover, these instruments are partially obstructive as regards the exit of vaginal and uterine secretions, and totally so as to sexual congress.

Their removal and reposition *by the patient*, for these purposes, is oftentimes equivalent to a nullifying of the objective result, since, in retroversion, they are quite likely to be introduced *under and behind the cervix uteri*, thus perpetuating the displacement.

Furthermore, they exercise pressure upon a portion of the uterus evidently designed to be especially freed from such contact; and may not be used where inflammation already exists, unless for the relief of a *proidentia*, where they become useful, temporarily, and are the least of two evils.

Pessaries of the *second class* are open to the last objection in a more marked degree. They either embrace the cervix in an inelastic ring, or environ the annule of the *os uteri* with a cup which resists its normal variations.

They must be removed during copulation; are dependent upon external harness, and as usually constructed, would lift the uterus bodily above the plane of the superior strait.

The "Hoffmann" instrument is of this class, and is in few respects superior to the stuffed rings and discs of the Germans, which have, it is hoped, now become obsolete. There is no "law of suction" whereby, antagonizing the force of gravity, it may elevate itself and the superincumbent organs.

It is properly doubted by authorities of the present day, if indeed intra-uterine stem pessaries, of the *third class*, should ever be used for the purpose of restoring a retroverted or retroflexed uterus.

They attack the organ in its most sensitive tissue, and even if tolerated for a time, are prone to excite early metritic inflammation.

Within the fourth class are included several instruments of fairer fame.

The "lever" of Dr. Cutler, novel in principle, adopts as its fulcrum so sensitive and mobile a structure as the posterior vulval commissure. The writer has found it useful in combating a minor rectocele, but for uterine retroversion, its almost universal result — *perineal irritation* — renders it unavailable.

The flexible ring of Dr. Meigs, based upon a correct idea of pelvic distances, is easily inserted and withdrawn; is in no sense obstructive; demands no external appliance, and is in a remarkable degree unnoticed by the wearer.

But it distends the vagina *laterally*, which is a fault in many cases; tends to obliterate the *reservoir* of the vagina by its tent-like expansion, and does not elevate the *os uteri* in the normal uterine axis. Moreover, its elasticity demands the adoption of a *material* less durable than is consistent with safety in long usage.

The self-extending pessary of Dr. Scattergood is not so flat, and has no objectionable lateral expansion, but its duplex character, and consequent liability to retain the vaginal secretions, make it almost uniformly offensive to the wearer.

In common with these three instruments, the lever pessary of Prof. Hodge possesses the incalculable advantage of avoiding all pressure upon or contact with the *cervix uteri*.

Like the last two, it takes the least sensitive tissues over the inner face of the pubic rami as a *point d'appui*. Unlike them, by its pelvic curve it preserves the receptive and retentive powers of the distal vaginal extremity, and thus avoids sterility. Elevating the *os uteri* above the pelvic floor, it oftentimes *greatly conduces* to the cure of cervical erosions, and by its relief of the torsion of broad ligaments, it sets in motion all the machinery of nature for the cure of hypertrophy of the womb.

It may be worn comfortably during coition, and frequently, by removing an irritable uterus from the possibility of contact, renders this function, for the first time, endurable.

Made of incorrodible material, it has been worn for years, by cleanly persons, without loss of its original smoothness and polish.

Under proper manipulation it may be moulded and adapted strictly to the peculiar demands of the wearer. It bestrides the

rectum, instead of resting upon it, and conduces to ease of defecation, and to normal vesical retentiveness.

Being in itself, when in place, a means of determining the patient's need of support, it is certainly the most philosophical, physiological and comfortable pessary yet known.

But however perfect in theory, this support often fails to effect relief, because of its unskillful application, and because of the wearer's ignorance or disregard of certain rules essential.

On the part of the physician, it should be seen to that the instrument selected be neither too wide nor too narrow.

If the former, the pain of introduction will intimidate the operator, and discourage the patient. It is to be remembered, however, that a pessary which passes the *ostium vaginae* with difficulty, may be worn with entire ease when fairly *in situ*, and particularly is this true of virgins and non-parturient women.

As a general rule, a width over all of more than an inch and three quarters should not be chosen for such cases.

The variable laxity of the tissues concerned makes this far from absolute, but it is certain that *when introduced*, the instrument should never create great lateral tension. Neither should it be too narrow, for thus it loses the intimate lateral contact of the vaginal walls, upon which it is often entirely dependent for the maintenance of an antero-posterior direction. Its retention also depends upon a proper correlation of the instrumental and vaginal width.

Moreover, the pessary should not be so narrow as, in the slightest extent, to compress the *cervix uteri*. In cervical inflammations and hypertrophies this is especially to be guarded against.

When possible, it should always be wide enough to rest at either side of the rectum, when that organ will conduce to maintain rather than overthrow its rectitude.

The length of the instrument, and its height, are important considerations. The former should never exceed three inches and a half, nor the latter be more than two inches (*vide JOURNAL*, January, 1870.)

Contractions of the vagina will often require that these dimensions should only be approximated by a *gradation* of instruments, inserted at proper intervals of time. And in all cases of difficult reposition and adjustment, the condition and form of the

urethra must be respected. If it be tender or prominent, the anterior and transverse bar of the lever must be deflected downward and backward.*

Having thus chosen and prepared an instrument, the manner of its insertion is not unimportant. A decubitus upon back or side may be taken by the patient. The position for the use of Dr. Sim's speculum is desirable when difficulty is apprehended. No lubricating material is so good as castor oil, and the operator should remember that the only *distensible* tissues concerned, in the outset, are those of the perineum. Thus he will spare the *urethra*, and will intrude the pessary obliquely and at one side of that protuberance, avoiding the delicate structure of the *fourchette* as well.

When the uterus is small and movable, it may be possible to pass the distal arch of the instrument behind the cervix, before allowing it to assume a flat position upon the vaginal floor. But, commonly, this latter change should be made so soon as the entire pessary is within the vagina. If the instrument has been well selected, its posterior extremity, by hooking the finger (from underneath) over either longitudinal bar, will be readily sunk until the cervix slips suddenly, and to the great relief of the patient, over the arch, and is suspended, looking downward and backward, in the normal uterine axis.

It is in this last manœuvre, oftentimes, that one finds the patient most resisting, and it is here that the actual reposition of the uterus takes place. If the instrument has been *first* introduced entirely, and it is of a proper length, before the extremity of the cervix may pass over the arch, the uterine axis *must* assume a parallelism with the axis of the superior strait, or even pass into the direction of anteversion. This excess of transit it is

* The writer has abandoned the general use of the "horse-shoe" form of Prof. Hodge's pessary, finding that the "closed bar" lever is more comfortable, and does not hinder coitus, and that the urethral curve above mentioned actually conduces to the propriety of its position.

It does not seem to be understood that any necessary deviation from the commercial form of the pessary may be obtained in a few minutes, by warming *one portion at a time* over the chimney of a kerosene lamp, and fixing it with a *gloved* hand, till the rubber cools and "sets." Too rapid heating results in a loss of polish, which is detrimental.

proper that the physician repeat, by tipping the front cross-bar downward toward the rectum, in order that he may be assured (by simultaneous abdominal palpation) that the *fundus uteri* has left Douglas' *cul-de-sac* to be occupied by the small intestines. With this assurance, and with the knowledge that the whole instrument is adapted to the conformation of the patient, and is, to a certain extent, free to accommodate itself to her position, motion, etc., he may consider that his instant duty is done.

The after-treatment consists in such frequency of observation as the exigency of the case requires; the sensations of the wearer, the condition of the vagina, and the position of the instrument, being the *criteria* whereby the attendant determines the necessity of alterations in the form or dimensions of the pessary, or of a temporary withdrawal of it from over-sensitive tissues.

Daily injections of water (or mucilaginous decoctions, in certain cases,) are essential to cleanliness and health, and it is proper to remark that the various astringents in common use, are liable to fasten upon the instrument the coagulated secretions of the vagina, and demand its occasional withdrawal, lest it become thus roughened and irritating.*

The wide variety of circumstance attending this class of practice, renders any specific rule a mere assumption; but it may be stated, generally, that the need of watchfulness on the part of the physician is proportionate, first, to the *duration* of the displacement.

If of long standing, there may be a degree of vaginal contraction difficult to overcome, or even so great relaxation as will render the mechanical means adopted unstable in its position and office.

Second, the *degree* of retroversion is to be regarded. When this is "complete," the general system may have been wrought up to a very irritable and intolerant state, so that any change is, at best, for a time, of uncertain utility.

* The writer has removed the vulcanized rubber instruments of Prof. Hodge, two and even four years after introduction, to find them perfect in smoothness and polish, and he has found them, within two months, coated with foreign deposits which caused serious annoyance to the parts involved.

Third, the *weight* and *condition* of the uterus may complicate the result; hypertrophies and inflammations will demand the greatest caution, until it be proven that the tendency of these morbid states is toward recovery.

Fourth, *hyperæsthesia* of the vagina and pelvic tissues, generally, will often demand modifications of the form and dimensions of the pessary used, or even require, temporarily, its complete withdrawal.

Again, the failure of the patient to observe and faithfully obey the injunctions of her medical adviser, will often frustrate the plans of the wisest, and bring odium upon the means employed. Instructed that constipation and vesical fullness is her direct foe, she will often suffer the suggestions of nature to pass unheeded, until they become imperative demands, meantime complaining that the support produces pain and impedes motion.

Taught to avoid any abdominal compression, as liable to put upon the pessary more weight than it can sustain, she will often, by tight dressing, or by such labor and exercise as require the forcible contraction of abdominal muscles, annihilate the benefit received. Informed that cleanliness is essential to comfort and health, her daily vaginal ablutions are forgotten, till vaginitis and its attendant evils force her to regard counsel. Besought to note the earliest signs of failure on the part of the instrument to elevate and support the womb, she passes weeks, nay, even months, without such investigation as might provide against the ultimate and grave results of her imprudence.

"What wonder that *"cures are rare,"* and *"accidents common!"*

In brief, under *most favorable circumstances*, and *with watchful care*, it is believed that the pessary of Prof. Hodge will accomplish all that the inventor claims for it, and that it is a safer and better instrument for the relief of lapse, prolapse and retroversion of the uterus, than any mechanical contrivance yet proposed.

Finally, it is due the subject, and the writer's ends, to say that there undoubtedly exists among the profession an inclination to demur at the claims of uterine displacements as an important class of affections.

This fact was met, a few months since, by the publication of a

few cases illustrating their bearing upon the female economy, as disturbers of its healthful relations.

It was also true that much of the doubt, silent and expressed, upon the question of the utility of pessaries, was due to false ideas of the anatomy of the pelvic contents. This error was treated very briefly in a more recent paper.

It remained to inform those who had never investigated the subject, of the existence of an instrument which conformed to the anatomical and physiological demands of woman, and to suggest some of the salient points whereon its usefulness might depend.

It is hoped that the medical public may discern, in these attempts, nothing more than an earnest desire to make available to the inquirer the fruits of much experiment, and many and varied disappointments in a wide and interesting field of research.

ARTICLE II. — *Medical Domain of the Turkish Bath.* (Continued.) By M. P. HANSON, M.D.

In our former article we labored to show from physiological reasoning, and well ascertained facts, that the Turkish bath is the most natural, safe and powerful agent for the accomplishment of many indications of cure in the treatment of disease, viz. :

To equalize the circulation, and thus remove congestion.

Distribute nutrition.

Restore, and keep active all the secretions, and thus eliminate poison from the system.

If my conclusions are admitted, all physicians will be prepared to concede to the thermæ a wide range of usefulness in the prevention and cure of disease, and the experience of ages among the Eastern nations, and the more enlightened experience of the best medical authority of Ireland, England, France and Germany, for the last twelve years, amply justifies such a concession.

And, as a matter of fact, we find,

I. That the bath is of the greatest utility in all passive diseased states, wherever action is below par, as in the commencement of acute diseases; in the premonitory stages of fevers; and inflammations. In the congestive stage of eruptive diseases — measles,

scarlet fever, small-pox, etc., whenever collapse takes place, and the symptoms show a retrocession of the fluids from the surface to the interior; whenever congestion of vital organs exists or is apprehended.

II. The Turkish bath will diminish, or prevent the liability to take infectious diseases. Heat is the greatest disinfectant known. Heat that will harden albumen (or cook an egg), will kill any animal poison, whether it be the natural secretions of animals, or the matter or effluvia of infectious diseases, as small-pox, syphilis, etc. Also, the liability to take infectious diseases often depends on a habitually sluggish condition of the kidneys, with scanty secretions. Now, the powerful revulsion to the surface, and drain of fluids and effete matter secured by the bath, eliminates the poison from the system.

III. In *Bright's disease* the condition of the patient begins to improve on his first introduction to the bath. Even in cases where the secretion of urine is almost suspended; where the system is saturated with urea, and dropsical effusion is general, and the brain begins to show signs of the irritation of the poison in the blood, the bath will correct the most troublesome symptoms more surely and quicker than any other means known. Even in cases where the kidneys are so far disorganized as to render a cure hopeless, the bath will cause the skin to take on a vicarious function, and it will, as Dr. Shrudichum declares, "throw out large quantities of uric acid, and rid the system of the effete and poisonous matter that should have been discharged by the kidneys," and thus prolong and make comfortable a life that, under any other treatment, would be very short and wretched in the extreme.

IV. In *diabetes* the functions of the skin are suspended, and extra duty thrown on the kidneys. The bath will restore the functions of the skin as nothing else will, the quantity of urine and its specific gravity begins to diminish immediately, the inordinate thirst disappears, sleep returns, the spirits revive, the pain in the loins and limbs subside, and the whole condition and appearance of the patient changes in many cases as by magic.

V. In nervous diseases of the heart, and in those connected with organic disease, angina, pectoris, hydro-pericardium, the hot room does actually quiet the circulation and improve the condition of the patient almost immediately on his entrance.

VI. In *bronchitis*, or irritative congestion of the windpipe and larynx, the bath cannot fail to be permanently useful, for this disease is usually only symptomatic of a morbid condition of the skin and digestive organs. In acute affections of the throat, even in croup and diphtheria, the bath will almost invariably save life.

VII. In *consumption* the bath will, on the clearest abstract grounds, as well as on the showing of facts, produce the greatest ratio of arrests of that terrible disease.

The tubercle producing products of imperfect digestion are drained out of the system; internal congestions are removed; the air-cells dilate; the relaxed skin braced; the appetite and power of appropriation increased; night sweats checked, and sleep secured.

VIII. In *dropsies*, whether of the shut cavities or cellular tissue, the bath is the most direct and natural cure, for it appeals directly to the absorbents to furnish water to protect the surface, and the effused fluid is actually taken up and restored to the circulation and evaporated from the surface. I have seen many pounds of fluid taken out of the system in a single bath, and the actual measurement of the patient reduced, around the abdomen, three inches.

IX. In *chronic liver disease*; in enlargement, or simple congestion; in the passage of gall stones; and all liver obstructions, the bath will afford relief quicker, and at less expense to the system, than any other treatment.

X. In *gout* and *rheumatism* the bath is the remedy *par excellence*.

XI. In *diarrhœa* and *dysentery* the bath is the cure, as determining the fluids from the internal linings to the skin, thus relieving internal congestion, on which the disease depends.

XII. The bath will take down, summarily and safely, excessive obesity, while it will as surely promote the nutrition of the ill nourished, increasing the appetite in proportion as it increases the power of appropriations.

XIII. The bath is the truest and best anti-spasmodic in bilious colic; in spasms of the bronchial tubes; asthma, even in lock-jaw, and tetanus. Between the combined effect of the hot room and the cold douche, spasms and cramps, of all sorts, will find a power to control them, by equalizing nervous action, and causing division of nervous excitability.

XIV. The Turkish bath will remove that very offensive personal odor, whether of the breath or the person, that attaches to some apparently cleanly and healthy people, and always, more or less, to the insane, giving that peculiar stench to asylums where they are congregated. This condition depends upon the accumulation of effete matter in the follicles and sebaceous glands of the skin. The bath, by flushing these drains, will remove the cause of insanity, in many cases, and make some people that are not insane fit for human society that never were before.

XV. *In uterine diseases*, whether suppressions or dysmenorrhœa, or that general failing of all the functions, known under chlorosis, the bath will invariably relieve, by removing the conditions on which the symptoms depend, whether of congestion of the organ, which is most frequently the case, or lack of development of the function. In either case, the bath is the power by which the function can be established and controlled.

But I have gone far enough into detail. No experienced physician, if he admits any conclusions, will fail to see that the medical domain of the thermæ is vast and important.

Dr. Carl Luther, of Berlin, says: "Formerly, when I received a patient, my first inquiry was to find the name of the disease. Since I have adopted the Turkish bath, I feel so sure of a cure I do not care to know the name of the disease."

Dr. Gosse, of Geneva, says: "The Turkish bath is the real panacea for the larger portion of the diseases that assail mankind."

Dr. I. L. W. Shudichum, of London, says: "In the Turkish bath I feel that I have put into my hands the most powerful and certain, and, at the same time, the most safe and agreeable therapeutic agent in existence."

Dr. Erasmus Wilson, of London, in an address to the British Medical Association, said: "We have thus presented to us the effects of the bath, applied to the skin:

"1st. An improvement of organic structure.

"2nd. An improvement of secretive function.

"3rd. An improvement in circulation and respiratory power.

"4th. An improvement in innervation and sensation."

"The bath that cleanses the inward as well as the outward man; that is applicable to every age; that is adapted to make health healthier, and alleviate disease, whatever its stage or

severity, deserves to be adopted as a national institution, and merits the advocacy of all medical men; of those whose especial duty it is to teach how health may be preserved, and how disease may be averted."

Dr. John Balbirnie, of London, says: "If I were asked to give a brief and distinctive definition of the Turkish bath, I would say, it is that which claims the exclusive, pre-eminent power of physiologically opening the safety valves of the living mechanism; or developing a high activity of the depurating functions of the animal body, and so fulfilling the first grand indication for the cure of all diseases."

ARTICLE III.—*Musk*. By J. E. O'BRIEN, M.D., Phillipsburg, N. J.

AMONG the specifics used to be considered musk for hiccough. While legitimate causes have happily removed many other drugs from the list, musk is in a fair way to succumb to the evil effects of adulteration.

I think it was Prof. Wood who, after trying several druggists' specimens, succeeded with a pod taken from his own cabinet. As far as I can learn from others, failure now attends every prescription of musk. In a recent search for the pure drug, one of two New York professors of *Materia Medica* upon whom I called informed me that he had ceased to lecture upon musk, so little confidence was felt in it there.

In this connection, I offer the following case, premising that the patient was a personal friend:

January 12. J. K. Erysipelas of face. Upon second day, congestion of the brain. The usual means: tinct. iodine, iron, bleeding, shaving of the head, ice to the scalp, enema, et al., were used in their appropriate places. Upon the ninth day delirium had ceased, pulse soft, skin moist, face still swollen.

January 21. Patient began to hiccough in morning; kept it up all day. I prescribed musk; Dr. Cavanaugh, of Easton, in consultation, prescribed blister. Morphia at night.

January 22. Notwithstanding morphia, hiccoughed all night, and still at it; Dr. C. thinks he will die; Dr. Field, of

Easton, called; recommends Hoffman's anodyne; also chloroform to epigastrium. Suggestions carried out.

Having exhausted the resources of this place in musk, Dr. F. obtains some in Easton. Given: grs. x every two hours.

23rd. I obtained a fresher article in Easton, at \$32 per ℥; it is given from noon until ℥j has been taken.

24th. Hiccoughing steadily except an intermission of three hours, from 7 to 10 A. M., which we refer to the last prescription of musk. We now give quinia.

R	Quinia Sulph.,	-	-	-	-	-	-	-	-	℥j;
	Morphia Sulph.,	-	-	-	-	-	-	-	-	grs. ij;
M. Ft. Pulv. No. vj.	S.	One every hour.								

This produced deafness, but the hiccough continued unabated, the spasms occurring every second, with exhausting force and painful regularity.

25th. No change; hiccoughing steadily; patient nearly worn out.

26th. Believing that pure musk, could it be obtained, would stop the hiccough and prevent death from exhaustion, I determined to seek the pure drug, and went to New York for the purpose of obtaining the assistance of Professors of Materia Medica in the search. The professors of two different colleges very kindly recommended me to a reliable Broadway druggist, who offered me powdered musk, but I was skeptical of powders, and refused. Finally, at the old drug house of W. H. Schieffelin & Co., I obtained two fine specimens of the glands from *Moschus Moschiferres*, containing about ℥ij of powder each; price \$18.40. Getting back at 7 P. M., find the patient rapidly sinking under the unremitting spasms of hiccough. I leave six powders of grs. xij each, directing one every two hours.

27th. At 5 A. M., when last powder was given, hiccough ceased. No more until 1 P. M., hiccough for twenty minutes, then ceased.

28th. At 5 A. M. "a few draws." This was the last of the hiccough. Gave quinia sulph, ℥ij during the day.

Patient very sore about precordia; relieved by blister. All through the case patient took beef tea, made rich with cream, and in the last week, brandy. Some sequela occurred in the shape of

cough, also an abscess over middle of right sterno mastoid, which discharged freely. The patient gradually gained strength, and now, February 20th, is able to walk about.

Among other remedies, I prescribed :

R	Potass. Bromidi, -	-	-	-	-	-	-	℥ ss;
	Tinct. Card. Comp., -	-	-	-	-	-	-	℥ vj.

M. S. Tablespoonful three times daily.

But he failed to take it.

We are satisfied that pure musk saved this man.

ARTICLE IV.—*Amputation of the Right Arm at the Shoulder Joint, with excision of a portion of the Shoulder Blade, for Necrosis.* By W. H. HESS, M.D., Nebraska City, Nebraska.

H. A. GRAHAM, aged twenty-eight years, a soldier in the late war, received a gunshot wound in the elbow joint, for which his arm was amputated immediately above the wound. The stump appeared to do well for a time, but two months after the stump was attacked with pain, and continued at intervals until pus formed and an opening made for its exit. The pus was found to contain small particles of bone, and the pain was lessened for a time, but again returned, and continued at intervals until the patient was unable to endure it longer, when a second amputation was performed, in September, 1866, being two years and three months from the time of the first operation. The result was again ineffectual, as the pain and disease returned after a lapse of three months, which he endured until July, 1869, (the ligatures having been left in over two months may possibly have been the exciting cause,) when, from loss of sleep, occasioned by severe pain, he was unable to attend to his business. I was sent for, and found him considerably reduced, both in mind and body, nervous, slightly feverish, with quick pulse and very restless, complaining of pain in the bone extending to the shoulder joint. There was but little undue redness or swelling, and no external openings or appearances of any having existed. After a careful examination, I decided that nothing but the removal of the remaining portion

of the humerus would prove effectual. Hence, on the following morning, I proceeded as follows: making an incision from the tip of the acromion process to the lower end of the diseased bone, which gave vent to a quantity of green and bloody pus, accompanied with a peculiar odor that always attends the escape of long pent up pus with diseased bone; it was with considerable difficulty that the bone was detached, there being anchylosis between the head of the bone and joint. The humerus being entirely removed, I was a little surprised to find the disease extended to the glenoid cavity and anterior border of scapula. An incision was now made from top of the acromion process along the anterior border to the anterior and inferior angle of the scapula, nearly half that bone being removed by the bone forceps, including the glenoid cavity; the diseased bone being all removed, the wound was well cleansed with a solution of carbolic acid, tents soaked in the same solution left in the cavity, the parts were brought together with the ordinary suture, and cold water dressings sparingly applied. The patient done well, and returned to his home, in Iowa, eight days after the operation. A solution of carbolic acid was injected in the wound every day for three weeks after, to favor healthy granulation. The patient is yet perfectly free from any symptoms of the former difficulty, and healthier than ever before. Carbolic acid is, in my opinion, one of the most valuable remedies we possess for diseased bone, having had numerous cases to test the value of it.

ARTICLE V.—*Abnormal situation of the Anus with Intestinal Calculi.* By B. C. BRETT, M.D., Broadhead, Wisconsin.

HEREWITH I transmit the report of a case which may be interesting to the medical gentlemen who read your journal, not because there is anything striking in an operation which the good sense of any physician would have suggested, but because of the rarity of circumstances which would call for such an operation.

I was called, December 10, 1869, to see B. G., a little girl, ten years old. On arriving, I learned from her mother the following history:

She was congenitally deformed; the anus being too small and situated too far forward. Her health was always poor, owing, as she thought, to the heavy doses of cathartics which she was obliged to take. When she was two years old she discovered some plum seeds in the rectum, and, with a bent wire, succeeded in bringing out some of them; but others remaining, had seemed to increase in size until their presence became a serious hindrance to defecation. The dejections were never larger than a clay pipe-stem.

On examination, I found an anal aperture a half-inch in diameter, when fully distended, communicating with the rectum by a canal three-fourths of an inch long, and situated close to the posterior commissure of the labia majora. In fact, the perineum consisted of simply a continuation of the recto-vaginal septum of a uniform thickness from above downwards. The normal point for the anus was marked by a faint red line and slight depression about an inch in rear of this opening. Having passed a sound into the rectum, I found it unusually large, it having been subjected to almost constant distention for several years. At about four inches from the orifice I detected a concretion, which I brought down by using the sound, bent in the shape of a hook. Having grasped the stone with a pair of slender polypus forceps, I found it too large to remove except by crushing, or by enlargement of the aperture, which latter operation, in consideration of the abnormal size and situation of the anus, seemed advisable. Accordingly, having put the patient under chloroform, the posterior wall of the canal was incised to the depth of over a half inch, when the stone was removed without difficulty. I also detected and removed three others. To prevent union of the cut surfaces, and thus insure permanent enlargement of the anus, the finger has been used as a bougie once a day. The patient is now walking about, retains her feces well, has an easy and free evacuation each day, and enjoys better health than ever before.

The largest of the stones removed measured three and a half inches in circumference. They were all ovoid in form, and nearly equal in size. Having divided one of them, I find it composed of concentric layers of what appears to be carbonate and phosphate of lime, having a plum seed for a central nucleus. The probability is that these seeds which, in a well formed child, would

have passed readily out, in this case had remained in the rectum, gradually increasing in size, for these eight years.

To what extent this patient will experience the need of a better perineum if she lives to become a mother, is an interesting query.

ARTICLE VI.—*Addendum to Article of H. Culbertson, M.D., Assistant Surgeon United States Army (Retired) in THE CHICAGO MEDICAL JOURNAL for March, 1870.*

IF "*form*" is understood to relate to "arrangement of particles," as well as to "figure," such a basis in medicine would not be a unit, as it would refer to "arrangement" and "figure." It would seem that the basis of any system of medicine should be a unit, and that there is no definition of "*form*" which can rightly and generally apply in the consideration of the magnitude, density, porosity, temperature, attraction, repulsion, elasticity, expansion, contraction, rest, statical and dynamical relations, weight, friction, hardness, resistance to fracture, endosmosis and exosmosis, capillarity, pneumatic relations, and to the origin and death of organic bodies. It would seem more definite and scientific to look at these several qualities directly, and not indirectly, through the medium of "*form*," which, thus employed, is at best but a mere classification, and serves to cover up the diverse relations and processes going on in an organic body.

The third division of my friend, of the principles operating in an organic body, is "*form-force*." This, it is claimed, is nothing but the old term "*vitality*" applied to "*form*," with the object of rendering the subject more clear, by or through "*form*." If the term "*form-force*" be applied to the whole animal body as a "*form*," then the parity in the expression "*vitality*" and "*form-force*," will be apparent, for each thus considered relates to the power which maintains the life-body entire. Thus viewed, "*form-force*" is "*vitality*;" but the "*force*" of this "*form*" is still a mystery, and the numerous phenomena which take place in such a "*form*" are no more comprehensible through the expression "*form-force*" than through the term "*vitality*."

ZANESVILLE, OHIO, *February 15, 1870.*

ARTICLE VII.—*Report of a case of Diphtheria, followed by Epilepsy.* By N. BRIDGE, M.D., Chicago.

MR. T. B. W. S., English, aged about 35 years, has been many years in America and been employed as a clerk writing most of the time. He is slim and spare of frame, but says he has always had excellent health. During the past year, as his wife since avers, reverses of fortune have made him low spirited and hypochondriacal; has had from time to time momentary attacks of mental wandering, would often stop what he was doing, look vacantly a moment, make some strange remark and then appear natural; he has seemed, at times, almost stupid, would sleep much of the time and was easily imposed upon. He came to Chicago in October, 1869, and went to work in a packing-house as a laborer.

He was attacked with diphtheria about December 1. I was called December 5. His attack did not seem severe; yet he was apponic — speaking only in a whisper, had a not very thickly-coated tongue which was somewhat dark colored. False membrane was distinct and was beginning to loosen; there was anorexia, soreness of outside of throat with slight swelling, pain, not very severe, on right side of head; had not taken to his bed, and his nights had been quite sleepless, pulse 80.

Ordered gargle potass chloras, 3 minims hydrochl. acid and 10 m. tr. belladonna every three hours. Dov. pul. 4 grs. at night. Water compresses to the throat, and nourishment.

This treatment was continued, the patient improving, till the 10th, when 2 grs. quinine was ordered every morning.

He improved steadily, his appetite gaining until the 13th when, at night eating largely of oysters, he was attacked soon after supper with vomiting and a true epileptiform convulsion; the fit was repeated several times during the early part of the night and again near midnight. Gave dose — about 20 grs. — of bromide potass., a goblet of wine, 3 grs. quinine and $\frac{1}{4}$ gr. of morph. during this time. He fell asleep at 2 o'clock in the morning and had no more trouble.

He had no more fits until the night of the 16th, taking his two grs. quinine and a little wine at meal time. He was on the 15th much excited all day, and the following day. On the 16th late

P.M., he got very indignant about something and in the early evening had another convulsion. These continued to occur every 20 or 30 minutes for some hours. The paroxysms were short, would often last not more than half a minute and seldom over a minute; they began with a sighing sound often, paleness, tonic spasm, dilation of pupils, followed by slight clonic action, flushed face, etc., as in ordinary epilepsy. He was, of course, unconscious during the fits, but was fully aware after each that it had occurred. As his face began to be flushed the pupils would contract promptly and naturally. Once in a while no muscular spasm could be detected whatever. He was covered with a cold, clammy sweat, and said he felt a terrible weakness all through him.

After the first fit the pulse went down to about 33, the respiration being faster than normal. During the fits — or that part characterized by paleness, *his heart would stop beating*, and as the face became red at the close it would begin again, but much more rapidly, beating faster than normally, but soon settling down to its former slowness. The pulse felt labored and not strong, while the first sound of the heart was short and somewhat jerking; no other abnormality could be detected in it from first to last.

At 7 P.M. he was given 3 grs. quinine, $\frac{1}{2}$ gr. morph. and 4 $\bar{5}$ port wine, with mustard to the chest.

Convulsions grew less and I left him quiet and more easy at 9 o'clock. At this time the pulse was 33, full but not strong; respiration about 25 — conscious and sane.

At 11 $\frac{1}{2}$ P.M. was called to him again and asked Dr. Walter Hay to see the case with me. The paroxysms were found occurring every ten or fifteen minutes and very brief; pulse 28; weaker respiration 28; great feeling of weakness; cold, and moist skin. He was ordered whisky $\bar{5}$ ss every 2 hours, with beef tea intervening; also,

R	Ferri Bromid,	-	-	-	-	-	-	-	-	$\bar{5}$ j;
	Syr. Simp., Aqua,	-	-	-	-	-	-	-	-	aa $\bar{5}$ ij;

Ms. teaspoonful every 4 hours, much diluted.

On the morning of the 17th he was much the same; the nurse said he got about an hour's sleep and freedom from paroxysms just before daylight. He was given 15 grs. brom. pot. and 3 grs. quinine. The paroxysms continued during the day at short inter-

vals, and during most of the following night, not more than two hours of sleep being procured.

On the 18th—A.M.—the pulse was a little stronger and 30 per minute; respiration 28. He had, at about daybreak, vomited a little black matter. Dil. hydrocyan. acid was given twice during the day in 2-drop doses, and for thirst, which was annoying, wine and water.

At night he felt a little better, the fits which had persisted during the day, having decreased in frequency to once in every half hour; the pulse was 30, and weaker, and the respiration 25.

The brom. tarri. was now omitted and 15 grs. brom. pot. and gtt. 20 tr. digital. given every 4 hours alternating.

The 19th found him much weaker; pulse and respiration the same in frequency as the day before, and the pulse was steadier. He had, during the night, gained a little sleep, and the fits were fewer. During the early part of the day the nurse blundered and gave two doses of the digitalis, double what was ordered. The general weakness increased; the heart stopped during the most of each fit and it seemed hard to begin again, when it did it was with a nervous, jerking and weak motion. The digitalis was stopped wholly; the other treatment continued. At 5 P.M. the pulse was 30 and a deathly coldness possessed the body; he was at this time, and had been between all the paroxysms, perfectly sane and able to converse intelligently.

He died at 6½ P.M. in a fit.

No *post-mortem* examination was had.

This man doubtless had the beginning of epilepsy a year before his death, and would have died of it sooner or later had he escaped the diphtheria. The paroxysms he had were plainly of an epileptiform character; nearly all their symptoms were characteristic of that disease.

Dr. Hay at once, on seeing him, expressed the opinion that there must be a mental element as a cause of the trouble, and one which reached back many months; although the patient had assured me of his perfect health up to the time of his attack, it was learned afterward that this prediction—as recorded—was well founded.

One symptom, certainly unusual, was that of the cessation of the heart's action during the convulsions. No man or book I have

consulted tells me that the heart ever stops in the fits of epilepsy; most works say nothing about it, or only by implication say it does not. This symptom was constant during the disease, occurring to a greater or less degree in every fit I observed; then the heart was weak and labored hard.

Not less unusual was the rapid breathing; he breathed, at times, as often as his heart beat, and for nearly three days the frequency of the respiration was fully one-half greater than normal. There was no disease of the lung, the air reached to every part, the sound was normal and no obstruction or feeling of suffocation existed at any time.

What is the explanation of these symptoms? What connection, if any, had they with the diphtheria?

Did the sudden development of this phase of the epilepsy occur simply as a result of debility and impoverished blood, or was it determined by the specific nature of the disease that preceded it? If the former, why did the heart stop in every fit, why the respiration so rapid? These symptoms were too constant to be accidental, they must have had a cause, what was it?

If, from the involvement in epilepsy of a part of the nervous mass near the origin of the par vagum, the function of that nerve was disturbed, why did it not affect the heart and lungs alike? Why make the action of one much more rapid than normal and that of the other less than half its wonted frequency?

Are the origins of the respective filaments of this nerve that go to the heart and the lungs so distant and distinct that they could have been so differently affected by a lesion in their neighborhood? If such a condition were supposable, is the lesion of the medulla and cord in epilepsy likely ever to be sufficiently circumscribed to allow of this?

Now, diphtheria is frequently attended with paralysis of certain muscles as sequels, occurring some days after the force of the disease is spent; while the paralysis, as a rule, is confined to a few parts, many different muscles are from time to time affected; those of the voice, the face, of respiration, and once in a while those of the heart, are involved. The paralysis is not always, if indeed often, complete, the muscle being simply impaired in power, not wholly disabled.

Is it unreasonable to believe that in this case the muscular struc-

ture of the heart was so affected ; not paralyzed, but so weakened that it with difficulty moved ; so much debilitated that, at the beginning of each paroxysm, by the peculiar nervous spasm or a peculiar state of the capillary circulation at that moment, it was stopped altogether, to begin again when the capillary circulation and normal nervous conditions were restored?

If such a view is admissible, may not the rapid breathing be explained by supposing that the lungs in answer to the normal action of the pneumogastric took on an increased action to more fully ærate the blood, a work which was highly necessary from the slowness with which it moved through the lungs? The character of the breathing differed in no wise from that which often occurs from the action of too much carbon, or other effete matter in the blood as in violent exercise or in a bad atmosphere. Moreover, if this notion be correct, if the walls of the heart were weakened, how did the case differ, so far as the heart was concerned, from some cases of angina pectoris, when, as authors aver, the heart dilates without power to contract and expel its contents and the patient keeps motionless for fear of death?

Correspondence.

"FORM AND MOTION."

ZANESVILLE, OHIO, *March 2, 1870.*

To the Editors of THE CHICAGO MEDICAL JOURNAL :

PLEASE convey to your critical correspondent* my thanks for calling attention to my communication,† in which form and motion were pointed out as the physiological and physical unities of organic life. Say to him he may hew away at his, not mine, ideals of "figure" and "moving about," to his heart's content, and I shall never say, stay thy hand.

As he said nothing for or against form and motion as I used

* CHICAGO MEDICAL JOURNAL, *March, 1870, p. 134.*

† CHICAGO MEDICAL JOURNAL, *January, 1870, p. 6.*

them, no further reply than this acknowledgment of my thanks for his courtesy is necessary.

To reproduce in other minds the exact impressions of our own, by the arbitrary symbols of language, has ever been environed with difficulties.* The tiresome repetitions in legal documents are due to this cause, though other illustrations are neither far to seek nor difficult to find. To avoid this in science, new words are coined to express different shades of meaning from those in common use; though these differences have to be pointed out in common words at last; and the use of new or unusual words, where no pressing necessity for such exists, savors of pedantry.

In my case this seemed unnecessary, as "form and molecular motion," as commonly understood, appeared to be sufficiently definite, especially as they were illustrated by actual clinical cases.

Since the publication of my memoir in THE JOURNAL, the following remarks on form and motion I find in an apparently recently published work,† as there used. The author does not, however, claim for them the importance to which my investigations have led me, nor did they meet my eye until after the appearance of my memoir in your pages. They, perhaps, are better than my own, because they, apparently, are calculated to reproduce in the minds of others my own mental impressions, which are here represented with a good deal of exactness.

"True idea of form." "We may repeat here that in the true idea of the Form of an object is involved not merely its *structure*, or that part of its nature which the anatomist is concerned with; it includes also the whole of the qualities and dispositions which pertain to it, and which distinguish it *socially* from other things. And this, in fact, is its *essential* nature, being that which gives it a place and a function in the general economy of creation; thus the object and end for which it was created. The end is always nobler than the Means, for the means are only processes by which the end shall be attained. In all our groupings and classifications, therefore, we should view the organic structure as

* *Atlantic Monthly*, October, 1864.

† *Life; its Nature, Varieties and Phenomena*; by Leo. H. Grindon; 5th American edition; 1869.

intermediate between the Artist and the end He has in view." Page 495.

"Reviewing these various and wonderful processes, we cannot fail to observe how, in its every phase and expression, the great sign and certificate of life is MOTION. Usefully, then, may we pause upon the consideration of it as a kind of summary and continent of vital phenomena. Nothing exists independently of motion as its cause; by reason, likewise, of motion, all things hold together and preserve their form. 'Passive life,' sometimes spoken of, is a contradiction in terms; certain states of being may be relatively passive, but there is no such thing as absolute passivity. In no case a state *ipso facto*, passivity is everywhere an incident of motion, consequently to be referred to motion, and to be explained by motion. Doubtless there is a great diversity in the degree and amount of motion; also in its manifestation to the eye. We must not confound it with *moving about*. Motion, ordinarily so called, implying visible change of place and position, and furnishing us with ideas of time, does not comprise the All of motion. There is motion which no eye can perceive, motion which we are made aware of only by witnessing its results. Of this kind, indeed, is the chief part; the most wonderful and efficient movements in the world are those which proceed in secrecy and silence. The feebler and briefer the exhibition of motion, especially the latter, the lower is the expression of life; the more energetic and continuous it is, the higher is the life—so apart from structure, motion is a criterion of vital excellence, of course under the reservation that the quality of life depends primarily and essentially on its End; else would the sea be more living than a plant; and a watch, or other piece of self-acting mechanism, commend itself as of nobler nature than many animals." Page 100-101.

If agreeable to you, further illustrations, based on clinical cases, will be prepared for your pages during the present year.

Z. C. McELROY, M.D.

Foreign Items.

M. FLEURY reports to the *Gazette des Hopitaux* a case of spontaneous popliteal aneurism, treated under his direction, at l'Hotel Dieu de Clermont-Ferrand, by flexion, resulting successfully, after eight days' treatment.

The subject, a cavalry soldier, jarred his right knee in the act of mounting his horse, the left foot being already in the stirrup. The consequences were pain and swelling in the knee and the development of an aneurism as large as an egg. Six months afterward, upon his admission to the hospital, the compressor of Dupuytren was applied, but was discontinued in consequence of the œdema of the limb resulting from its use. The patient, a very intelligent man, in obedience to instructions, kept his leg flexed upon the thigh during several consecutive hours at a time, even when sitting, suspending it only to walk about occasionally. This treatment, continued during eight days, resulted in a complete cure.

M. Verneuil reports to the Imperial Surgical Society, the extraction of three uric-acid calculi, weighing respectively 98 and 27 grammes (weight of smallest not given), by the median operation, from the prostate gland of a patient aged 64 years, followed by complete recovery.— *Gazette des Hopitaux*.

M. DE ST. GERMAIN presents to the same society the results of twelve experiments upon the influence of electricity upon parturition, as follows:

1st. In no case could uterine contractions be induced, unless they had already occurred spontaneously.

2nd. In each case in which the contractions, having already commenced, recurred at intervals of fifteen or twenty minutes, the application of the conductors to the lateral regions of the abdominal surface was followed in about ten minutes by a considerable acceleration in the uterine contractions.

3rd. Each contraction induced by electricity was of much longer duration and much more severe than the others.

4th. The dilatation of the neck appeared to proceed constantly with rapidity under the influence of galvanic excitation.

5th. In all the cases observed by us up to this time, the expulsion of the placenta has followed immediately that of the infant.

It was either projected spontaneously outside of the vulva immediately after the expulsion of the fœtus, or was found in the vagina, and withdrawn without the least traction.

6th. Twice only was a slight bluish discoloration observed upon the infant, and in one of these the cyanosis could be attributed to the closely encircling cord. — *Gazette des Hopitaux*.

M. SALMON DE CHAMPOTRAN, an official of the Council of State (Paris), who died a few months since, has left to the Faculty of Medicine of Paris, a legacy to found a chair of The History of Medicine. The contest for the chair is warm, the most prominent candidate being M. Bouchut, of the children's hospital, so well and favorably known by his clinical lectures, by his investigations in general pathology, and his Treatise on the History of Medicine and Medical Doctrines. — *Gazette des Hopitaux*.

M. SEE, in his introductory to the course of lectures upon the Application of Physiology to Medicine, at l'Hopital la Charité (Paris), gives the following as the results of the injection of the constituents of bile into the veins of an animal.

By separating the coloring matter and injecting the biliary acids, the following series of constant phenomena are produced:

1st. The retardation of the pulse by the excitation of the vagus nerve; the pneumo-gastric nerve being the antagonist of the motor ganglia of the heart, its excitation induces a retardation (of the pulse), which is likewise produced by the biliary acids exactly as by digitalis, more promptly and more surely, however.

2nd. The cutaneous itching may be explained by the excitation of the extremities of the sensitive nerves of the skin by the cholic and choleic acids.

3rd. The constipation is due to a great extent to the absence of these acids from the intestine. In the normal state they produce upon the muscular plane which is manifested by the contractions of the intestinal muscles; if this excitation is absent, there is retention of the fæces.

The action of the bile itself containing its coloring matter gives other results.

1st. The coloring of the fæcal matters, if this no longer flows into the intestine in consequence of obstruction of the biliary conduits, the stools are discolored, grayish.

2nd. The penetration of the bile into the blood when it finds its natural emunctories obliterated, determines the impregnation of all the tissues, and principally of the very vascular tissues, by biliverdin.

3rd. Once introduced into the blood, it tends to eliminate itself, hence the coloring of the different secreted liquids and more particularly of the urine.

Such is the origin, long misunderstood, of the phenomena which supervene in icteric maladies.

THE same distinguished physiologist explains the syncope (sometimes mortal), resulting from a blow upon the epigastrium, thus :

This violent blow occasions very active excitation of the abdominal segments of the pneumo-gastric nerve, which is transmitted to the medulla to be reflected upon the cardiac filaments of the pneumo-gastric, thereby inducing a diminution or even an arrest of the pulsations of the heart.

Moreover, there is associated with the pneumo-gastric the depressor-cardiac nerve of Cyon. This nerve, when excited, has the power to diminish considerably pressure in the vessels and consequently to weaken the circulation. Now this same excitation originating in the abdomen, involving the pneumo-gastric, is propagated likewise to the nerve of Cyon, and induces, by the intermediation of the medulla oblongata, a paralysis of the splanchnic vaso-motos and a consecutive dilatation of the vascular system; hence simultaneous weakness of the heart and of the vessels; hence diminution of the circulation and consequently cyanosis.

M. ROUSSIN, in a paper read before the Imperial Academy of Medicine, upon hydrate of chloral, its new mode of preparation and the characteristics of its purity, affirms that this agent absorbed or ingested into the economy, in any manner whatever, must be converted rapidly into alkaline formiate or chloroform.
— *Gazette des Hôpitaux.*

THE same author explains the tolerance of tartar-emetic in pneumonia, thus: When the pneumonia is extensive there is diminution of the respiratory surface, that is to say, the beginning of asphyxia, which is the cause of the tolerance, as we shall presently prove. In pneumonias of limited extent, however, and which only occasion a slight obstacle to respiration, the tolerance of tartar-emetic does not exist.

If in a case of pneumonia sufficiently extensive to diminish the respiratory surface, and to determine at the same time intense fever, the emetic does not provoke vomiting, it happens that, in consequence of the imperfect interchange of gas and atmospheric air in the lung, the carbonic acid is not eliminated from the blood; this accumulation of carbonic acid, which is characteristic of asphyxia from its beginning, paralyses certain portions of the nervous system, either of the periphery or of internal organs.

Amongst these latter nerves is the pneumo-gastric, in that portion of it which is distributed to the respiratory and gastric organs; hence the antimonial poison no longer produces upon the gastric filaments of this nerve, either at their periphery or at their centre, the centripital impression which is the point of departure of all vomiting. The vomiting is, in fact, nothing else than the reflex excitation of the nerves which are distributed to the diaphragm and to the abdominal muscles whose contraction effects the evacuation of the stomach. In this effort, the muscles of the abdominal cavity alone act, *the stomach is nearly inert*, it may on this account be replaced experimentally by a pig's bladder. This contraction of the muscles, and the nervous excitation in which it originates, can occur only by the aid of a central or peripheral impression; now, if the sensitive nerves have lost their sensibility, the first impression can no longer be produced, there is no more vomiting; it is exactly this impression which the carbonic acid destroys in the nerves.

Further, when carbonic acid exists in great quantity in the blood, there is perceptible not only a cutaneous anæsthesia, but likewise an anæsthesia of deep seated organs; the visceral nerves, especially the pneumo-gastric no longer respond to impressions, absolutely as the nerves of the skin. Tartarised antimony once injected into the veins, may in passing through the vascular system, excite the gastric termination of the vagus nerve,

or its origin in the interior of the medulla, which thus provokes vomiting. Tickling of the throat occasions vomiting by peripheral excitation of the pneumo-gastric, the pharynx owing its sensibility in great part to a branch of the vagus nerve.

A CHAIR of anthropology has just been established at Florence in favor of professor Mantegazza, now professor of physiology at the University of Pavia.

NOVEL OPERATION.—M. Hervey de Chegoïn reports, October 13th, to the Imperial Surgical Society a successful operation for cataract upon an ass 21 years of age. The size of the eye necessitated the construction of special instruments, and the large size of the pupil and the softness of the lens permitted the passage of a portion of it into the anterior chamber, from which it soon disappeared by absorption. The operator remarks naively enough, that owing to the difficulty of adopting biconvex lenses, the patient was enabled to pursue his occupation (which was principally eating), without them. — *Ibid.*

EPILEPSY.—Dr. Octave Huard, of New Orleans, U. S., reports to the *Gazette des Hopitaux* (Paris), the following statistics of a case of Epilepsy in a patient aged ten years, treated successfully by Bromide of Potass, viz.:

Approximate number of attacks from the beginning of the disease up to November 1st, 1867, 2000. November, '67, 59. December, '67, 84. January, '68, 116. February, '68, 83. March, '68, 105. April, '68, 87. May, '68, 98. June, '68, 129. Total 2743. Treatment with Bromide of Potass was commenced July 1st, 1868, since which the number of seizures have been as follows: July, 1868, 65. August, '68, 88. September, '68, 13. October, '68, 7. November, '68, 7. December, '68, 31. Total 211. Thus during three years previous to the beginning of the treatment the number of attacks was *about* 3000.

During the eight months immediately proceeding, *positively* 763 attacks. During the six months immediately after the commencement of the treatment, 211 attacks.

The diminution of the number of the attacks commenced, only after two months, when the system was nearly saturated with the

medicine, that the improvement was manifested in a remarkable manner.

The increase in the number of seizures during December over November was due to the suspension of the medication. No attack having occurred in three weeks. — *Ibid.*

THERAPEUTICAL Society of Paris. M. Gubler recognized in two patients, a painter since dead, and a tinner still under treatment, epileptiform phenomena positively due to saturnine intoxication only; for there was no evidence, especially in the second patient, to show that these individuals were alcoholized.

It is somewhat difficult to establish clearly the differential characteristics of poisoning by lead and by absinthe in consequence of the epileptiform attacks.

In the first patient, the coma persisted more than twenty-four hours; then under a dose of 6 grammes of Bromide of Potassium this patient was partially relieved, then sunk gradually.

The second patient experienced very violent attacks, and was gradually restored by the use of Bromide of Potassium. — *Gazette Medicale.*

Selected Articles.

ARTICLE I. — *On Relapsing Fever.* A Lecture by AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the Bellevue Hospital Medical College.

[THE general interest felt in the profession and pervading the public mind on this subject, will cause our readers to excuse the less amount of our translations, and the space occupied by the following valuable observations by Prof. Flint. — ED.]

GENTLEMEN: Some weeks since, when I took up in order (as I have done for the last nineteen years), in my didactic course, relapsing fever, I stated that there were cases then under observation, at Bellevue Hospital, which presented the characters of that disease. I had not then observed the cases sufficiently to feel quite sure concerning the nature of the disease. I afterward

stated that there could be no longer any doubt as to the correctness of the diagnosis, and promised to devote to the disease some further consideration. I propose to redeem that promise in my lecture to-day.

Let me first name the publications which you may consult for facts, chronological and geographical, relating to the past prevalence of this disease; and also, for a fair exposition of the knowledge contained in medical literature respecting it. I shall content myself with doing this, for I do not wish to occupy your time with historical details which you can, if you choose, glean from books at your leisure.

You will find this disease treated of concisely in most, if not all, of the late works on the Practice of Medicine. It is considered fully in Murchison's excellent treatise on the continued fevers of Great Britain. In the *British and Foreign Medico-Chirurgical Review*, number for July, 1851, you will find a very able article on the Continued Fevers, including relapsing fever, with numerous bibliographical references. A list of successive epidemics, in Scotland, Ireland and England, is given in that paper. Dr. William Jenner, in addition to an account of an epidemic which he studied in 1847, submits facts establishing the non-identity of relapsing with typhus and typhoid fever, in a paper published in the *Medico-Chirurgical Transactions*, vol. xxxiii, new series, 1850.

In this country, exclusive of systematic treatises on the Practice of Medicine, medical literature contains very little relating to relapsing fever. Judging from the little that has been published, the disease, with a very few exceptions, has not heretofore existed on this side of the Atlantic. Dr. Meredith Clymer observed and described fifteen cases, occurring at Philadelphia in 1844.* Dr. A. Dubois reported a few cases, occurring in New York, in 1848.† I recorded fifteen cases at the hospital in Buffalo, 1850-'51; and I gave the results of the analysis of these cases, together with an account of the disease as described by British writers, in my work entitled, "Clinical Reports on Continued Fever, based on an Analysis of one hundred and sixty-four Cases." This work, which I suppose to be now out of print, was published in 1852.

The circumstances under which these fifteen cases came under my observation were as follows: In 1850-'51, I was engaged in the study of continued fever. Of forty-eight cases which I recorded and analyzed in those years, following the example of Louis, fifteen were distinguished by the occurrence of a relapse

* *Vide* Treatise on Fevers, 1841; also, Notes in Aitken's Science and Practice of Medicine. American edition.

† *Vide* Transactions of American Medical Association, vol. ii.

after convalescence had appeared to be established. I was then unacquainted with the distinctive characters of relapsing fever; and, of these fifteen cases, nine were included in the group of cases of typhoid fever, one case was considered as typhus, and five cases were placed by themselves and called cases of doubtful type. The question, whether these fifteen cases were cases of relapsing fever, arose after reading the article in the *British and Foreign Medico-Chirurgical Review* to which reference has been made. I then analyzed these fifteen cases separately, and found that the facts corresponded, in all respects, with the history of relapsing fever. The results of the analysis are given in my "Clinical Reports on Continued Fever," and I shall refer to them, in connection with the clinical history of the disease, in this lecture.

Some of the different names by which the disease is now, and has been heretofore known, are to be mentioned. In past literature it has been called "five-day fever," "seven-day fever," "short fever," "mild yellow fever." By some of the British writers it is distinguished as "famine fever," and by some German authors as "hunger pest." The name "relapsing fever" is based on the most striking of its peculiarities, and it involves no hypothesis; it is therefore to be preferred to any other, with our present knowledge.

By way of introduction to the consideration of important questions concerning the disease, I will read a report of one of the first of the cases received into the hospital — a case which is typical as regards the prominent, distinctive features of this species of fever; and I will then introduce a patient, who is supposed to be passing through the primary paroxysm, and also a patient who has passed through the disease, and is now convalescing. The report which I shall proceed to read was drawn up by Dr. William M. Polk, senior assistant physician on the third medical division:

Henry Gordon, aged seventeen, a native of this country, by occupation a laborer, was admitted December 17, 1869. He came from No. 37 Mulberry street, and he stated that several persons in the house in which he lived had been ill with the same kind of fever. He had been exposed to many hardships, inclusive, probably, of a want of proper food.

He was well, up to four days before his admission, when he was seized with a chill, followed by fever and pain in the limbs. He had no epistaxis, nor diarrhœa. He suffered much from headache. On his admission the pulse was 110. He then complained of severe muscular pains. The bowels were constipated. The skin was hot, but moist. There was no eruption; there was no jaundice.

December 18, the day after his admission, he was free from fever. The pulse and temperature were normal. There was profuse perspiration on this date.

He continued free from fever from the 18th to the 28th, that is, ten days. The last four of these ten days he was sitting up. He continued, however, to complain of muscular pains, and he was quite weak.

On the 28th of December, after getting up, at 7 A.M., he felt chilly sensations, and soon returned to bed. The pulse was now 100, and the temperature in the axilla was 100°. At evening the pulse was 110, and the temperature 101°. On the 29th, the pulse was 120 at A.M., and the temperature 102°. He had epistaxis for a few moments, on this date, and diarrhœa. The fever persisted, without any abatement, for the two following days, the pulse being 120, and the temperature 102°. On January 1, at 9 A.M., the pulse fell to 90, and the temperature to 100°. He was then perspiring profusely. At 6 P.M. the pulse and temperature were normal. Free perspiration continued. The muscular pains had continued to be, and were still, severe.

The relapse of fever thus ended, after a continuance of five days. After January 1 there was no return of fever. On the 13th of January he was able to sit up. He convalesced without any drawback, and was discharged, quite well, January 24. There was no eruption of any kind. The diarrhœa continued only two days, and was slight.

The treatment was as follows: Ten grains of quinine were given daily, for the first four days, in one dose, at noon; and two grains three times daily, during the intermission. Dilute nitric acid was given during the continuance of fever. Bismuth, kino, and opium, were given to relieve the diarrhœa.

The points in this case to which your attention is to be directed are, the abruptness of the attack; the continuance of high febrile movement for five days; the sudden and complete disappearance of fever, profuse perspiration occurring at the same time; an apyrexial period of ten days; an abrupt relapse of fever, lasting five days, the second febrile career ending suddenly, with profuse perspiration, and convalescence then taking place; the prominence of muscular pains, both during the fever and in the intermission; the residence of the patient in a house where this fever existed; his suffering from deprivations before being attacked; and, finally, the absence in the history of the characters which distinguish, severally, typhus, typhoid, and remittent fever.

I shall now introduce a patient who is supposed to be passing through the primary febrile career of relapsing fever. The patient is a girl, fourteen years of age. She was admitted with fever, which has now continued for five days. The pulse is 140,

and the axillary temperature 101° . Now let us consider the question, What are the grounds for supposing this to be a case of relapsing fever?

In the first place, it is an essential fever of some kind, for a careful examination of the different organs of the body has failed to disclose an acute inflammation anywhere; it is not, therefore, a symptomatic fever. It is not one of the eruptive fevers, for there has been ample time for the eruption and other diagnostic characters of these fevers to become manifested, and they are wanting. If not relapsing fever, it must be a febricula, or remittent fever, or typhus, or typhoid fever. The duration and the intensity of the febrile phenomena show that it is not a febricula. None of the characters of remittent fever have been exhibited. The abruptness of the attack, and the absence of the abdominal symptoms of typhoid fever, warrant us in saying that it is not, in all probability, that disease. Finally, were the disease typhus fever, it is time for the eruption to have appeared, and this is rarely wanting in cases of typhus. The eruption is not present in this case; moreover, there is not the dusky hue of the face which characterizes typhus; nor is there the physiognomy representing the mental condition which belongs both to typhus and typhoid fever. There has been no incoherency or passive delirium, and the patient is now able to give an accurate account of the past and present symptoms.

Thus, gentlemen, you see that the diagnosis is reached, at the present time, in this case, chiefly by exclusion; but, if the disease be relapsing fever, we may expect daily a sudden cessation of the febrile symptoms, and a period of apyrexia, or an intermission, which will probably be followed by a relapse. The diagnosis will then be confirmed.*

Before this patient is removed, let me call your attention to the presence of petechiæ on the lower limbs. The small, round, dark spots which you see are truly petechial, that is, they are minute extravasations of blood, or ecchymoses. They may occur in relapsing fever, as in typhus or typhoid fever, and also, in various diseases. They have no diagnostic significance, nor do they denote an unusual gravity of disease.

I now introduce a patient who is convalescing from relapsing fever. The first career of fever was seven days, in this case; then followed an intermission of seven days. The relapse of fever lasted only four days. He is able to walk up to the amphitheatre, and is nearly well enough to be discharged.

The remainder of my lecture I shall devote to a brief consideration of the following questions: What points in the clinical

* The subsequent history of this case corroborated the diagnosis.

history of relapsing fever are distinctive of the disease; and has it any anatomical characteristics? What are the grounds for considering this disease as a distinct species of fever? What are the points involved in the diagnosis of relapsing fever? What is the existing state of our knowledge of its causation? What is the prognosis? And, lastly, what are the indications for treatment? These questions I shall take up *seriatim*, following the order in which they are stated.

What points in the clinical history of relapsing fever are distinctive of the disease; and has it any anatomical characteristics? My remarks under this head, as well as in relation to the other questions, will be based, not exclusively on the information to be obtained from the writings to which reference has been made, but on the observations in this hospital during the present prevalence of the disease. Through the zeal and assiduity of the house physician of the third medical division, Dr. Thomas J. Moore, I have been furnished with sixteen recorded histories. These histories have been recorded with care, the pulse and axillary temperature having generally been noted twice daily. I am much indebted to this gentleman for his interest and fidelity. I should add that most of the cases were under my observation. Dr. Moore has also furnished a tabulated statement of statistical facts relating to the cases throughout the hospital.* I have carefully analyzed the sixteen cases just referred to. In addition, I have the results of an analysis of the fifteen cases which I observed and recorded in 1850-'51. The two collections thus make thirty-one recorded cases.

Abruptness of invasion characterizes the disease. The attack is sudden. There is no prodromic period. The seizure is almost always marked by a well-pronounced chill, which is immediately followed by febrile movement. Usually, the patient at once takes to the bed; but, in some cases, one, two, or three days pass before there is this evidence of yielding to the disease. Moderate perspiration occurs shortly after the fever begins, in a considerable proportion of cases. This was noted in seven of twelve cases which I formerly observed. It is noted in the histories of several of the cases recently under observation. The perspiration in some cases is abundant, and it may recur repeatedly during the continuance of the febrile paroxysm.

The fever attains quickly to either considerable or great intensity, as denoted by the pulse and axillary temperature. Thus, of two cases in which the disease was developed in the hospital, in one, the pulse on the first day was 120, and the temperature 103°; in the other case, the pulse on the first day was 130, and the tem-

* This statement is appended to the lecture.

perature was 103° . During the continuance of the first paroxysm, the pulse and temperature generally denote a persistent intensity of fever, the pulse ranging, in different cases, from 100 to 140, and the temperature from 100° to 105° . The oscillations are rarely great, and those which occur are irregular in their occurrence.

The cessation of the fever is as abrupt as the accession. The pulse and temperature quickly fall to nearly or quite the normal standard. The transition from high fever to complete apyrexia takes place, often, in a few hours; usually this is accompanied by profuse perspiration, which continues for several hours, and even an entire day. Not infrequently, the pulse and temperature fall below the standard of health. In two of the cases recently under observation, the pulse fell to 54, and in one case the temperature to 95° . In a day or two both the pulse and temperature rise again to the normal standard.

The duration of the primary paroxysm is stated to be, in the majority of cases, from five to seven days. Exceptionally, it may be only two days, and it may be twelve days. In the cases which I formerly observed, the average duration was nine days, the maximum being twelve and the minimum six days. Of ten cases, among those recently observed, in which the duration was definitely determined, the minimum was four days, the maximum eight days, and the average duration was a fraction under six days.

During the apyrexial period or intermission, the absence of fever is complete. It is incorrect to call this period a remission; the fever does not remit, but it intermits. The average duration of this period is stated to be about seven days; but it may not exceed two or three days, and it may extend to twelve days, or even more. In the cases which I formerly observed, the average duration was five days, the longest being eight, and the shortest three days. Of the cases recently observed, the minimum duration of this period was five days, and the maximum nine days. The mean duration was a fraction over six days.

The relapse, like the primary attack, is sudden. It is generally ushered in by chilly sensations, but not so constantly by a well-pronounced chill as the first paroxysm. The fever in the relapse quickly becomes more or less intense. The intensity may exceed that of the first paroxysm. But, in the majority of cases, the intensity is less. The relapse also ends suddenly, and in most cases with profuse perspiration.

The duration of the relapse is stated to vary between three and five days. It may, however, be only twenty-four hours, and it may extend to ten days. In the cases which I formerly observed, the minimum was two days, and the maximum ten days. The mean duration was six days. Of the cases recently under obser-

vation, the duration of the relapse is noted in eleven. The shortest duration was three days, and the longest was eight days. The average was four and a half days.

It is to be borne in mind that the relapse does not always take place. It was apparently wanting in one of the cases recently observed. On the other hand, a second, a third, and even a fourth and a fifth relapse have been observed. In none of the cases which I have seen has there been more than a single relapse.

To illustrate the course of the disease, as represented by the pulse and axillary temperature, I will read the daily record of these symptoms in the history of a case which is selected as typical.

The patient was admitted into Bellevue Hospital on the fifth day of the disease :

	PULSE.	TEMPERATURE.
5th day.....	105	102.5°
6th ".....	104 A.M.	103.5° A.M.
" ".....	108 P.M.	103.5° P.M.
7th ".....	90 A.M.	102.5° A.M.
" ".....	96 P.M.	101° P. M.
8th ".....	88 A.M.	103° A.M. Profuse
" ".....	114 P.M.	104° A.M. perspiration.
9th ".....	60 A.M.	96° A.M.
" ".....	68 P.M.	97° P.M.
10th ".....	60 A.M.	98° A.M.
" ".....	54 P.M.	96° P.M.
11th ".....	56	98.5°
12th ".....	64	98°
13th ".....	64	98.5°
14th ".....	100 A.M.	105° A.M.
" ".....	105 P.M.	105° P.M.
15th ".....	96	102°
16th ".....	114	104° Profuse
17th ".....	66	91° perspiration.

The points which have been presented are those most highly distinctive of relapsing fever. It remains to notice certain other points, belonging to the clinical history, which are more or less characteristic.

Of symptoms referable to the digestive system, nausea and vomiting occur sufficiently often to be somewhat distinctive, especially when this disease is contrasted with typhus and typhoid fever. Not infrequently, these symptoms are prominent and persistent during the febrile paroxysms. The matter vomited is green or yellow, from the presence of bile. The tongue presents nothing distinctive; it is generally coated, and in some cases becomes dry and fissured. The vomiting of blood, presenting

the character of "black vomit," has been observed; but it is a very rare symptom, and I have not heard of its occurrence in any case during the present prevalence of the disease. It is generally associated with hæmorrhage in other situations, and it is to be considered as an accidental event, not as an element of the disease. It probably denotes a scorbutic complication. Diarrhœa occurs very infrequently; constipation is the rule. The diarrhœa, when it occurs, is evidently accidental. Meteorism, in a moderate degree, is not uncommon; it existed in nine of the fifteen cases which I formerly observed. In only one case, however, was there any considerable tympanitic distension of the abdomen. Tenderness, on pressure, over the epigastric region, existed in six of these fifteen cases. Slight tenderness in the iliac region is not uncommon. Notable tenderness exists, in some cases, over the liver and spleen; and enlargement of these organs is sometimes determinable by palpation and percussion. I have not observed a craving for food during the paroxysms, which, according to some writers, is distinctive of this form of fever. The appetite, however, returns during the intermission, and the digestion may be active in this stage.

The occurrence of jaundice may be mentioned in this connection. This event occurs in a small proportion of cases, but its infrequency in the other continued fevers renders it somewhat distinctive of relapsing fever. It was present in two of the fifteen cases which I formerly observed, and in four of the sixteen cases recently under observation. In these six of thirty-one cases the jaundice was slight, and the cases in which it was present were not unusually severe. It is doubtful if the statement that this event is an element of gravity be correct. The event is much more frequent in some epidemics than in others. The name "mild yellow fever," which has heretofore been applied to some epidemics of relapsing fever, derives whatever pertinency it has, from the occurrence of jaundice, sometimes in a considerable proportion of cases, and also from the occasional occurrence of black vomit.

A symptom referable to the nervous and the muscular system, is highly distinctive of the disease under consideration. I refer to arthritic and muscular pains, more especially the latter. During the first paroxysm, pains in the loins, the calves of the legs, and the muscles in other situations, are generally much complained of. They are never wanting, although, as regards intensity, they differ considerably in different cases. The muscular pains do not cease with the ending of the paroxysm, but they continue during the intermission; they are more or less prominent during the relapse, and they are apt to persist into convalescence.

The mental condition, perhaps, in a measure, accounts for the suffering from these pains. The perceptions are not blunted in

this disease as they are in typhus and typhoid fever. This is a negative point of distinction in contrast with the fevers just named. Another negative point is the absence of the delirium which characterizes typhus and typhoid fever. Delirium is by no means absent in all cases of relapsing fever; but the delirium is such as is apt to occur whenever there is high febrile movement, whether the fever be essential or symptomatic, and it is generally manifested only at night. In the daytime the mental faculties are generally intact. The condition known as coma-vigil does not belong to the clinical history of relapsing fever. This statement is also true of subsultus, carphologia, and other ataxic symptoms which occur in grave cases of typhus and typhoid fever. Deafness is also a rare symptom in relapsing fever.

A distinctive point, in comparison with typhus and typhoid fever, is the absence of a characteristic eruption. In most cases there is no eruption. Sudamina or miliary vesicles are sometimes observed at the time when profuse perspiration occurs; but this eruption is incidental to various affections. The same is true of petechial spots which occur in some cases of relapsing fever. Other kinds of eruption are sometimes accidentally associated. Even the rose papules of typhoid fever sometimes occur in this as they do in various other diseases.

The physiognomy presents nothing distinctive. The face is more or less flushed, as in cases of symptomatic fever. There is not that degree of capillary congestion, marked especially on the cheeks, which exists in typhoid fever, nor the dingy complexion which characterizes typhus. The expression of indifference, vacuity, or stupidity, which is a notable characteristic of the fevers just named, is rarely observed in relapsing fever. In one of the cases recorded by Dr. Moore, it is stated that, in conjunction with slight jaundice, "the face was flushed, as if there existed erysipelas, excepting the cheeks, the latter being quite pale, and the contrast giving a very peculiar appearance."

The urine in relapsing fever is yet to be studied fully. It appears, however, that, as a rule, the quantity of urine is increased, and the urea is in larger proportion than in health. Great diminution, and even suppression of the urine, however, are sometimes observed, uræmic coma and convulsions taking place, but these cases are, happily, exceedingly rare.

It may be stated, as a point somewhat distinctive of relapsing fever, that there is very little liability to serious complications. In this fact we have an explanation, in part at least, of the very small rate of fatality from the disease. Pneumonia, however occurred in three of the fifteen cases which I formerly observed; but this complication, in these cases, did not prove fatal. It did not occur in any of the cases recently under observation. Of the latter cases, in three, mild bronchitis was a complication. Diar-

rhœa and dysentery have been observed to occur not infrequently in some epidemics.

What has just been stated with respect to complications holds true as regards sequels. As a rule, important sequels do not occur. A peculiar form of ophthalmia, which was described as following the cases reported by Dr. A. Dubois, of this city, in 1848, is an exception to the rule. It has been repeatedly observed as a sequel of relapsing fever. The peculiarities of the ophthalmia are described in works which treat of the diseases of the eye. This sequel, however, has not occurred in any of the cases which I have observed. Relapsing fever, when it attacks pregnant women, almost always leads to miscarriage or abortion. The mother almost invariably recovers, but the child, no matter how near may be the end of gestation, as a rule, is either stillborn, or dies shortly after birth.

There are no constant lesions found after death which are distinctive of this disease. The spleen is uniformly more or less enlarged and softened; but this occurs in typhus and typhoid fever. The liver is, also, more or less enlarged, but without any special appearance or structural change. Changes in other organs, which may be found, are due either to complications or to antecedent disease. It is a negative point of distinction in contrast with malarial fevers and with typhoid fever, that relapsing fever is devoid of any anatomical characteristics.

What are the grounds for considering this disease as a distinct species of fever? Is relapsing fever a special form of disease; in other words, is it a distinct species of fever? I think facts warrant a positive answer to this question in the affirmative. Let us consider briefly the grounds for this opinion:

In the first place, the laws of relapsing fever, as regards the primary paroxysm, the intermission and the relapse, or relapses, are very striking and peculiar. The clinical history, in these respects, has but a remote analogy to the different types of intermittent fever, and to the very rare instances in which a relapse of either typhus or typhoid fever is observed. In respect of the distinctive points now referred to, relapsing fever differs essentially from any other form of fever; it stands alone. Moreover, as we have just seen, there are other distinctive points in its clinical history. That it is a distinct species of fever is a fair inference from the peculiarities pertaining its phenomena and laws.

In the second place, if it be not a distinct disease, it must be a variety of periodical, that is, malarial fever, or of either typhus or typhoid fever. Now, it may be clearly shown to lack certain characters which are essential to the fevers just named. To prove that it is not a form of periodical or malarial fever, it is sufficient to say that it has prevailed repeatedly in situations where

the special cause of intermittent and remittent fever, that is, malaria, does not exist; that it is undoubtedly a contagious disease, and that it is not controlled by anti-periodic remedies. The proof involved in these facts is so conclusive that it is unnecessary to cite further evidence. That it is not a variety of typhoid fever is shown conclusively by the absence of the anatomical characteristics of the latter disease, the so-called typhoid lesions of the small intestine; and also by the absence of the essential features pertaining to the clinical history of typhoid fever. The grounds for the non-identity of relapsing fever and typhoid fever are certainly stronger than for the non-identity of typhoid and typhus fever. The essential points of difference, indeed, are more strongly marked than those which distinguished measles from scarlet fever—diseases which were once considered as identical.

To establish the opinion that relapsing fever is a distinct disease, it is then only necessary to show that it is not a variety of typhus. It is certainly a distinct species of fever, if its non-identity with typhus be proven. The points of difference in the clinical history of relapsing fever and typhus are very marked. A relapse of typhus is exceeding rare; and, when it occurs, the duration of the primary career of fever exceeds the average duration of the first paroxysm of relapsing fever. On the other hand, the occurrence of a relapse in relapsing fever is the rule, the exceptions to which are as rare as is the occurrence of a relapse of typhus. The characteristic eruption which is nearly constant in typhus never occurs in relapsing fever. The physiognomy and the mental condition in the two diseases present wide points of difference. The fatality, which is considerable in typhus, is comparatively insignificant in relapsing fever. But the conclusive proof is that relapsing fever affords no protection against typhus. Patients who have passed through the former have repeatedly contracted, by contagion, the latter. Murchison cites an abundance of facts exemplifying the correctness of this statement. Hence it is wrong to transfer patients affected with relapsing fever to hospital wards containing cases of typhus. There are no facts showing that the contagion of typhus ever gives rise to relapsing fever. The conclusion is, that each of these two diseases has its own special poison or miasm, by means of which it alone is reproduced; that is, neither of these two diseases is capable of communicating the other. This fact is sufficient to establish the opinion of their non-identity. A fact which is distinctive of relapsing fever, as contrasted with typhus and typhoid fever, is that its having been once experienced does not afford exemption from subsequent attacks. It has been known to attack repeatedly the same person.

What are the points involved in the diagnosis of relapsing fever? The laws of relapsing fever, relating to the primary

paroxysm, the intermission and the relapse, are so distinctive that there can hardly be room for doubt concerning the diagnosis after the disease has ended. There is difficulty in discriminating it from other essential fevers chiefly in the primary paroxysm. The differential points in this stage I have already presented in connection with the case introduced in the early part of this lecture. I shall content myself with a recapitulation of these points.

The diagnosis involves certain distinctive characters which belong to the primary paroxysm; but it is to be based more especially, on negative points; in other words, on reasoning by way of exclusion. The distinctive characters are the abruptness of the invasion, the rapid increment of fever, the frequent occurrence of moisture on the skin, or perspiration more or less abundant, without any marked abatement of the fever, the prominence of muscular and arthritic pains, and, in certain cases, the occurrence of jaundice. These are the positive points which are diagnostic of relapsing fever. The fevers to be excluded are the eruptive fevers, febricula, remittent fever, typhus and typhoid fever. Scarlet fever and measles are readily excluded by the absence of the eruption and of the characters which are distinctive of these fevers during the period of invasion. Small-pox is excluded after the third day by the continuance of fever and the absence of the eruption. It is not always practicable to decide at once that the disease is not a febricula; but the intensity of the fever and the notable muscular pains do not belong to the latter. Doubt, however, is soon removed by the persistence of the fever. Typhoid fever is excluded by the absence of a prolonged access, and the absence of the abdominal symptoms, before sufficient time has elapsed for the appearance of the eruption, and of the characteristic mental condition. Typhus is excluded by the absence of the eruption, which appears earlier than in typhoid fever, by the absence of the dusky complexion, and by the absence of the mental condition—the latter also being apparent earlier than in typhoid fever. Remittent fever is excluded by the absence of remissions, these being determinable by a notable diminution of the axillary temperature in some cases in which they are not distinctly denoted by the pulse. Of course, the prevalence of relapsing fever is taken into account in arriving at the diagnosis.

What is the existing state of our knowledge as regards the causation of relapsing fever? Is relapsing fever communicable from the sick to the well? Undoubtedly this question is to be answered affirmatively. This opinion rests on facts derived from the different sources of evidence, exclusive of inoculation, which establish the contagiousness of other diseases; for example, typhus fever. Of those who are attacked during the prevalence of the disease, a large proportion are known to have been brought into

contact with, or close proximity to, patients affected with it. The disease is diffused in hospitals among fellow-patients and those who have charge of the sick. During the period in which cases were received in Bellevue Hospital, after the disease began to prevail recently in this city, namely, between November 14, 1869, and February 6, 1870, twelve persons contracted the fever in the hospital. These twelve persons were especially brought into contact with patients affected with the disease, and in no instance did it attack one who had not been thus exposed. One of the senior assistant physicians residing in the hospital has had it. The orderly in one of my wards contracted it; and his wife, who came to nurse him, was attacked by it. The disease has often been diffused in localities in which it did not previously exist, after the importation of a case.

Facts, however, go to show that it is not a highly-contagious disease. Considerable exposure appears, in general, to be necessary. The area of the infecting distance appears to be limited, and it remains to be ascertained whether it may be transported by fomites. Some facts, cited by Murchison, render it probable that it may be diffused in the latter mode. It is especially communicable when the miasm is derived from a number of patients in the wards of hospital, or in close apartments. The disease is not likely to be contracted from single patients in well-ventilated rooms. The investigations of the Metropolitan Board of Health in this city, during the present prevalence of the disease, have shown that it is diffused chiefly among those living in overcrowded, illy-ventilated tenement houses. Of the propriety and importance of removing these patients to hospitals or wards devoted specially to cases of this disease, there can be no doubt.

Destitution, deprivations, and especially deficient alimentation, are powerful predisposing causes. Of this fact, the past history of the disease, at different times and places, furnishes abundant evidence. The significance of the names "famine fever" and "hunger pest" relates to this fact. It is a question whether the special poison may not be generated by the want of food and other sanitary deficiencies, irrespective of its production as an infectious miasm. I am not prepared to offer an opinion respecting this question. It is to be remarked, however, that in typhoid fever we have an example of a fever which is undoubtedly, under certain circumstances, communicable, but which, it is probable, in the majority of cases, originates independently of contagion. For interesting and important details respecting the causation, I refer you especially to the treatise by Murchison.

Statistics do not show any notable etiological influence pertaining to age, sex, or season. As regards age and season, relapsing fever thus differs from typhoid fever.

The causation of relapsing fever is of importance with refer-

ence to the inquiry whether the disease is likely to prevail indefinitely in this city, and in other parts of our country. Although its diffusion involves generally, and perhaps always, a contagious principle, the history of the disease in other countries shows that it occurs as an epidemic, and, after continuing for a certain time, it disappears completely. Thus, in the city of London, for the fourteen years preceding the winter of 1868-'69, there had been no cases of the disease. The complete disappearance of the disease for so long a period goes to show the operation of predisposing and co-operating causes in conjunction with the special poison on which the production of the disease depends. In view of the past history of the disease, it is a fair conclusion that it will not become a permanent visitor on this side of the Atlantic. It will prevail in this city as long as auxiliary causes favor its diffusion. It will be likely to be carried to other places, especially to large towns where a considerable portion of the population are living under circumstances favorable to its occurrence; but it may be expected to disappear not long after it ceases to prevail as an epidemic. The effective means for arresting the spread of the disease are, thinning the population of overcrowded tenement-houses, dispersing the occupants of insalubrious dwellings, relieving destitution, especially as regards food, and promptly removing patients to hospitals devoted to cases of relapsing fever.

The prognosis in relapsing fever. It is, at first view, remarkable that a fever of such intensity, and prevailing especially among a class of persons whose powers of tolerance are impaired by previous hardships and want, should have such a small rate of mortality. The mortality, in different collections of cases, varies from two to four per cent. Dr. Moore, in his statistical report, states that, of one hundred and three cases admitted into Bellevue Hospital between November 14, 1869, and February 6, 1870, only two proved fatal.* What is the explanation of this low rate of mortality? An explanation, which perhaps is sufficient to account for the fact, has been already given, namely, the disease is very rarely accompanied by any serious complications. The comparatively much greater fatality of typhus and typhoid fever is due mainly to complications. These fevers rarely kill *per se*, that is, death is not purely an effect of the intensity of the disease.

Of the fatal cases of relapsing fever, the death, in a certain proportion, is attributable either to complications, such as pneumonia and dysentery, or to antecedent affections, for example, disease of the kidneys. But this fever may destroy life, irrespective of any important complications or antecedent affection. Several observers have reported cases in which sudden death occurred appar-

* *Vide* Dr. Moore's report appended to this lecture.

ently from syncope. One of the fatal cases in this hospital apparently exemplified this fact. The death was sudden and unexpected during the night, on the seventh day of the disease. At the time of death, the primary paroxysm seemed about to end, free perspiration having taken place. Neither coma nor convulsions occurred, and, as far as information could be obtained, the dying was by syncope. The autopsy revealed no important lesions except that the kidneys appeared to be fatty.

Suppression of urine followed by uræmic coma and convulsions is sometimes a cause of death. This fact was exemplified by one of the two fatal cases occurring in this hospital. It remains to be determined whether the suppression of urine may result from simply functional inactivity of the kidneys, or whether in all cases disease of these organs exists, as either as intercurrent, or an antecedent affection.

What are the indications for the treatment of relapsing fever? There are no known means which can be relied upon for cutting short a relapsing fever. With our present knowledge, there are no remedies which, employed in the intermission, will prevent the relapse. Quinia has been used freely in this stage recently at this hospital, but with no success. Its inutility, as a prophylactic, has been abundantly shown by different observers. Reasoning by analogy, I am led to think that the mineral acids may exert somewhat of that modifying influence, in this disease, which is so manifest in typhus and typhoid fever. They have been, to some extent, used in the cases recently treated here, but not sufficiently to warrant any conclusions based on experience. They certainly deserve to be tried. The treatment, with our present knowledge, must be expectant, meaning by this term, that it is to consist of palliative measures, and those addressed to the particular indications in individual cases.

The intensity of the fever during the paroxysms may be lessened by sponging the body with water, and perhaps by the wet sheet. Cold water may be taken into the stomach freely. Ice-cold carbonic-acid water is an acceptable and useful drink to allay thirst. Cephalalgia may be relieved by cold applications to the head. The bowels should be kept open by saline laxatives. The muscular and arthritic pains call for the use of opium, especially if it produce no unpleasant after-effects. Irrespective of the pains, opiates are indicated to relieve sleeplessness.

The dietetic treatment is important, more especially in the cases in which deficient alimentation has been a predisposing cause of the disease. In this fever, as in other fevers, when alimentary support is indicated, milk is the form of diet to be preferred. And it is to be borne in mind that in this, as in most diseases, there is never any danger of the over-appropriation of nutriment; the only risk is in the ingestion of more food than can be digested.

It is desirable that, during the paroxysms, from one to two quarts of milk should be taken daily. In the intermission, when the appetite returns, as much substantial food as can be digested should be allowed; and the more food is appropriated in this stage, the better is the patient enabled to tolerate the relapse. Tonic remedies are indicated throughout the disease, and especially in the intermission. Quinia in small doses, and some preparation of iron, are the tonics to be preferred.

If the symptoms denote asthenia, alcoholic stimulants are indicated. The occasional occurrence of death from syncope renders it important to watch carefully for this indication. When there is any room for supposing that alcoholic stimulants may be useful, they should be given tentatively and continued, or not, according to the effect, especially on the pulse and temperature. They are, of course, urgently indicated if the symptoms denote danger in the direction of asthenia.

Attention to the urine is important. It is to be recollected that a cause of death is suppression of urine. If the urinary excretion be deficient in quantity, or, if the quantity being sufficient, there be a deficiency of urea, diuretics are indicated. Should the kidneys not respond to diuretics, hydragogue laxatives or cathartics are indicated, with a view to eliminate urea through the alimentary canal. Active hydragogues are, of course, indicated, if uræmic coma or convulsions should supervene.

It is stated that convalescence from relapsing fever is notably slow, patients remaining for a long time much enfeebled, and tolerating with difficulty affections which may occur before the recovery is complete. This has not been a marked peculiarity in the cases which have come under my observation. It is doubtless more likely to be marked in the cases in which there had been impairment of the vital powers from innutrition and hardships before the fever was contracted; and also, it is more likely to be marked where abundant alimentation and the judicious use of stimulants have not entered into the treatment of the disease.—*New York Medical Journal, March, 1870.*

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen and Cooke, whose catalogue of medical books will be sent to any address upon request.]

The Physiology of Man; Designed to Represent the Existing State of Physiological Science, as Applied to the Functions of the Human Body. By AUSTIN FLINT, JR., M.D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, etc., etc. Secretion; Excretion; Ductless Glands; Nutrition; Animal Heat; Movements; Voice and Speech. New York: D. Appleton & Company, 90, 92, and 94 Grand Street. 1870. Pp. 526.

THIS is the third volume of a series commenced several years since by the younger Flint. The first volume, it will be recollected, discussed the Blood, Circulation and Respiration—the second, Alimentation, Digestion and Absorption. A concluding volume will be devoted to the functions of the nervous system, and the process of generation and development. Each volume, however, constitutes a separate and distinct treatise, being complete in itself.

The previous volumes have been well received by the profession, and the author is well known—beyond the necessity of an introduction. The present volume will enhance his reputation as a pains-taking, careful student and observer. Aside from numerous experiments in verification of the reports of others, he has instituted many original experiments, and, particularly with reference to the excretory function of the liver, has developed new facts of great interest.

A feature in the work is the effort “to draw as closely as possible, the line of distinction between secretions proper and excretions,” and he believes the information in our possession is now of so positive a character, that we are able to subject the processes to definite generalization.

Personally, however, he indulges very little in attempts to generalize, an omission which may well be pardoned since he everywhere avoids any mere speculation or rhetoric. So great is his apparent dread of premature generalization that there is, if anything, a little too much grouping of facts, with too little effort to point out their essential relations. This is illustrated, partially, by the cavalier method in which he dismisses the doctrines of Dr. Beale, but more particularly by his discussion of the relation of the nervous system to the process of secretion. In his subsequent volume we hope to see this relation pointed out in a clearer and more philosophic manner. The limited and incorrect generalizations of Hall are scarcely improved upon by admission of the still more restricted system of Dr. Campbell.

But we are in no mood to find fault with a work which, taken as a whole, is so thoroughly satisfactory, and which does honor to American medical literature.

Those who have the first two volumes will, of course, buy this, and those who have not should at once buy the three.

The publishers have brought out this volume in uniform with the preceding volumes, and in a style which reflects great credit upon them.

The Cell Doctrine; Its History and Present State. For the use of Students in Medicine and Dentistry. Also a Copious Bibliography of the Subject. By JAMES TYSON, M.D., Lecturer on Microscopy in the University of Pennsylvania, etc., etc. With a Colored Plate and other Illustrations. Philadelphia: Lindsay & Blakiston. 1870. Pp. 150. \$2.00.

THIS treatise is brought out in the same style with the London edition of Dr. Beale's essay on Protoplasm. It is perspicuously written, and gives concise statements of the views which have been entertained with reference to the vegetable and animal cell from first discovery to the present time. Especial attention is given to the doctrines of Schleiden and Schwann, Henle, Martin Barry, Prof. Goodsir, Huxley (1853), J. Hughes Bennett, Todd and Bowman, Virchow, Dujardin, Schultze, Beale, Robin and Huxley (1869).

The author adopts, with some modifications, the views of Dr. Beale. We thank him, on our own part, for the Bibliography he

has given us, which is alone worth to us more than the price of the book.

We advise all interested in Physiology to give this essay a careful reading.

Modern Therapeutics; A Compendium of Recent Formulæ and Specific Therapeutical Directions. By GEORGE H. NAPHEYS, A.M., M.D., Chief of Medical Clinic of Jefferson Medical College, etc., etc. Philadelphia: S. W. Butler, M.D., 115 South Seventh Street. 1870. Pp. 390.

SOMETHING like a couple of hundred professional celebrities are represented in this compend. What they say about particular methods in therapeutics, and their formularized notions are herein, more or less, set forth. The formulæ are arranged in classes under the general variety of affections for which they are presumed, by authority, to have been found useful. For the busy practitioner it will be found very convenient to have at hand something of this sort to suggest methods with which he has previously been unfamiliar. It seems hardly necessary, in this age, to caution against the tendency to depend upon routine treatment which books of the kind are likely to foster.

The contemporaneous use of a little good-natured skepticism will avoid this result, and meanwhile the book will be a good floater for those who cannot swim, and an occasional relief for those who can.

The delay in issue (see advertising pages of JOURNAL) has been well made up to buyers by the addition of a hundred extra pages without increase of the proposed price.

Health by Good Living. By W. W. HALL, M.D., Editor of Hall's Journal of Health, etc., etc. New York: Hurd & Houghton. Cambridge: Riverside Press. 1870. Pp. 277.

WRITTEN for popular perusal, it is one of the few books of the kind we can conscientiously recommend. To our professional brethren who are afraid of "a good square meal," we especially commend it. It is full of good sense and is professionally unexceptionable in tone.

Pamphlets.

Second Annual Report of the New York Orthopædic Infirmary. Located at 1299 Broadway.

Address before the St. Clair and Sanilac County (Michigan) Medical Society. By the retiring President, J. T. TRAVERS, M.R.C.S.L.; with reports of committees, etc., etc.

In the same pamphlet we notice a highly interesting case, reported by our highly esteemed friend, Surgeon (U. S. A.) M. K. Taylor, of poisoning by the biniodide of mercury. Dr. T. points out the fact, that, unlike the bichloride, the biniodide forms no precipitate with albumen, which although recommended in the books as antidotal, is clearly not so, and from its preventing the action of other remedies should not be given. He is satisfied that in poisonous doses the biniodide is sedative and stupefying, and only the most prompt and efficient efforts will avail in saving life. He observes:

"So far as my means of judging indicate, the employment of liquor potassa, solutions of carb. potassa, extemporaneously prepared, lime-water followed immediately by bicarb. potassa; and the sulphide of ammonia, or potassa, the latter being the better, followed by emetics, or the stomach-pump, constitute our chief antidotes."

The very general use of this powerful agent as an antisyphilitic renders farther investigations of its best antidote desirable.

Historical Letter on the Introduction of Anæsthetics in Dentistry and Surgery in America, and on their First Employment in Midwifery in Great Britain. By Sir J. Y. SIMPSON, Bart., M.D., D.C.L., Professor, etc. Edinburgh.

A SPICY reply to the elder Bigelow, of Boston (Massachusetts, U. S. A.). The eminent Scotchman, herein, shows that, for at least once, Boston is not entitled to *all* the honors.

Report of the Board of Managers, Superintendent and Treasurer of the Western Lunatic Asylum of Kentucky, for the year 1869.

Anniversary Oration Delivered before the Medical Society of the District of Columbia, by J. M. TONER, M.D.

THIS address gives a complete historical sketch of the Society from its organization to the present time. It also includes a history of the military hospitals during the war, museums, etc., etc. As is the case with all things undertaken by this most estimable professional gentleman, it is well done, and will form a permanent chapter in the medical history of the country.

Michigan University Medical Journal. March, 1870. Conducted by the Faculty of the Medical Department. R. A. Beal, Ann Arbor, Mich., publisher. \$3.00 a year.

THIS is the initial number of a new medical monthly. It is neatly printed. Besides the editorial conduct of the Faculty, its issue is facilitated by a board of four "managing editors." If the publisher will now insist upon "payment invariably in advance," it will go far toward the achievement of success. The bane of medical journalism is the credit system, as the present writer is willing to make solemn affidavit. If the Michigan publisher don't believe this we offer him several thousand dollars of arrearages to this JOURNAL before it adopted the cash system. They will be sold at an enormous sacrifice in view of the approaching resumption of specie payments.

On the Influence of Mental Activity on the Excretion of Phosphoric Acid by the Kidneys. Silliman Prize Thesis. By LUTHER HODGES WOOD, Ph.B., M.D.

THIS paper recounts a series of experiments instituted for the purpose of confirming or refuting the propositions of Dr. T. R. Noyes (Am. Jour. Med. Sci., Oct., 1867) that the urine of the day is uniformly alkaline, and that of the night as uniformly acid. Dr. Noyes suggested, as accounting for this fact, that the causes of acidity were operating in both periods, and that the great increase of the alkaline phosphates in the daytime overbalanced the acid

reaction thus produced. The results given by Dr. Wood's experiments are tabulated, and also illustrated, by a series of nine diagrams.

The results are summed up as follows :

1. The *amount of urine* excreted varies at different periods of the day, even on a fixed diet; the day-urine exceeds the night-urine in the ratio of 3 to 2. The largest amount is excreted during the forenoon, the next largest in the afternoon, then comes that of the latter part of the night, and lastly that passed in the early part of the night.
2. The *density* of the urine varies inversely as the amount of urine passed; the morning-urine having a higher specific gravity than that excreted at night.
3. The *total amount of solids* excreted is greater during the day than during the night by nearly 50 per cent.; thus showing that the density is not diminished in proportion to the amount of urine passed.
4. The *reaction* of the day-urine is uniformly alkaline, that of the night-urine acid; while, however, acid urine is excreted during both periods of the night, it is the morning-urine only that is alkaline, that of the afternoon being acid.
5. The total *phosphoric acid* excreted per hour on an ordinary diet, is largest during the day, rising highest after the principal meal; while on a fixed diet, the excretion is greatest at night, the maximum being reached during the first half of the night, the amount diminishing in the afternoon; it is less still at 7 A.M. and least at 1 P.M.
6. The *alkaline phosphates*, when an ordinary diet is taken, are greater by day than by night; on a fixed diet the reverse is true.
7. The *earthy phosphates*, on the other hand, are largest in amount during the day, both on ordinary and fixed diets.
8. The *total phosphoric acid* is very greatly affected by the amount and kind of food taken.
9. The *variations* in the amount of phosphoric acid, considered as a whole, are not sufficient to afford any indication of the previous mental condition.
10. The *alkaline phosphates* are only *slightly increased* on increasing the amount of mental labor.
11. The *earthy* are *diminished* under the same conditions, by an amount varying from 20 to 40 per cent.
12. *No such increase of phosphoric acid* as would be required by the theory of the disintegration of nervous tissue during action, was observed in these experiments.
13. The *alkalinity* of the day-urine is not due to the presence of alkaline phosphates in excess.

Relaxation of the Pelvic Symphyses during Pregnancy and Parturition. By FREDERICK G. SNELLING, M.D. Published by W. A. Townsend & Adams, New York.

PREMISING that this condition has been known and commented on since the time of Hippocrates, and yet the allusions to it in the systematic treatises are scant and rare, he continues ;

"The affection appears to consist of a relaxation of the pelvic articulations, becoming apparent suddenly after parturition, or gradually during pregnancy; and permitting of a degree of mobility of the pelvic bones which effectually hinders locomotion, and gives rise to the most peculiar, distressing, and alarming sensations. It can, perhaps, be best illustrated by the following case by Dr. Duplain.

"The patient, Madame —, was 26 years of age, of a lymphatic temperament, married four years, and the mother of three children. The last child was born about the middle of May, 1867, after a labor lasting twenty-two hours, and was a child of unusual size. After its birth she was almost constantly confined to the bed, from the difficulty, and indeed impossibility of walking, and a singular and distressing sensation, as if the abdominal viscera were about to fall through the pelvic outlet. She also had vague pains, increased on motion, in the hips, at the symphysis pubis, and in the loins. As for the other symptoms, her appetite was good, her sleep sound, pulse normal, bowels regular, and urinary secretions healthy. The vaginal touch disclosed no malposition, or other disturbance of the uterine system. On palpation, the abdomen was supple and lax. On examining the patient in a recumbent position, the lower limbs presented nothing abnormal; their sensibility was intact, and movement was free and painless. But immediately upon arising, the sensation complained of returned with much severity, walking was accomplished with difficulty, and she dragged one foot after the other, inclining herself to the right and left as the case might be. On compressing the pubic and sacro iliac symphysis some pain was experienced.

"From the symptoms supervening upon delivery, the physician, M. Duplain (eliminating the possibilities of diseases of the spinal cord, of the pelvic viscera, lumbo-abdominal neuralgia, etc.,) judged it to arise from a relaxation of the pelvic symphyses, and the sequel justified the accuracy of the diagnosis.

"A bandage was placed about the pelvis and hips in such a manner as to compress and confine the articulations firmly. Walking immediately became easy: she could maintain an upright position, the pains disappeared, and at the end of two months, without any other treatment, the patient left off her bandage and found herself entirely cured.

"This may be regarded as a typical case of *uncomplicated* relaxation of the pelvic symphyses."

A number of other cases are given with cuts illustrative. Sup-

purative inflammation of the symphyses sometimes occurs, with exhausting discharge, rupture, caries, etc. For the diagnosis little instruction is needed, provided the physician remembers the possibilities of the case. The treatment involves that for the prevention or removal of inflammation and after its subsidence the wearing of a pelvic bandage for a lengthened period.

Profs. Fordyce Barker and Isaac E. Taylor, remarked, with reference to this paper, that it recalled attention to a subject of great importance. Each had seen several cases, and they endorse the use of the bandage, although Prof. Meigs thought it of little service.

It is clear from reading this paper that the supposed rarity of the lesion is not so great but that the subject demands the attention of practitioners.

Half-Yearly Compendium of Medical Science. Part V, January, 1870, Pp. 304, has just come to hand. From such examination as we have had time to give it, the present volume is an improvement on its predecessors, the editors — Drs. Butler, Brinton and Napheys — having devoted careful attention to the character of selections. \$3 a year. Single numbers, \$2. Nos. 1 to 4, inclusive, \$5. Address — S. W. Butler, M.D., 115 South Seventh Street, Philadelphia.

Literary.

Mauprat. A Novel. By GEORGE SAND. Translated from the French by VIRGINIA VAUGHAN. Boston: Roberts Brothers. 1870.

THE publishers are doing the American public good service by introducing to its readers the works of a most remarkable woman; a woman whose name has been widely pronounced, but whose works have been read in this country to an extent vastly below their real merit.

A Day by the Fire; and other Papers hitherto uncollected. By LEIGH HUNT. "Matchless as a fireside companion."—*Elia*. Boston: Roberts Brothers. 1870. Poetic prose from one of our most genial writers.

Red as a Rose is She, is the quaint title of a novel which we have not had time to look over, but being published by the Appletons and sold by W. B. Keen & Cooke, is of course good.

Editorial.

Sale of Diplomas.

ABOUT all the space that can be spared has been given to this subject. The Philadelphia University, through its Dean, W. Paine, M.D., expressly denies having been engaged in the business, but states that it is evidently the work of other parties. All the agencies hail from Philadelphia, and we are told there is a "Columbian University" in that city, and also a University of America, or American University, which operates in the same stock.

Meanwhile we can mention two practitioners in this city who have received diplomas recently from Philadelphia by direct purchase, neither of which is from the Columbian or American. We can also mention an honorary degree sent to a person here, who is not in practice, with an intimation that an honorarium of \$50 was expected therefor.

To one of the first two alluded to was sent a private letter, which, taken in connection with the rest of the transaction, to our mind proves that the writer is or was a party to the business of diploma selling, and the name signed is that of a Professor in a Philadelphia "University," neither "Columbian" nor "American."

We do not propose to figure as parties in a threatened libel suit, as did he of the *Reporter*, or else we should give the names of all concerned, and publish the letter. Diploma selling has grown into a business as well conducted as counterfeiting.

Cook County Hospital.

At the meeting of the Board of Supervisors of this county, a few days since, the authorities definitely stated that there was room for no more patients in the brick monstrosity below Eighteenth street, and propose to board out patients at "Providence Hospital," wherever that may be.

Is it not about time that some sense should find its way into the noddles of officials?

Let the old hospital be sold for a brewery, or packing-house,

and the money be applied to the purchase of *ample* grounds, well drained, and with a chance for the winds to purify the air above, and then put up cheap buildings, and plenty of them.

We repeat: Let us have no more Bastiles of Disease.

Medical Gossip.

DR. ELSBERG has devised a "pocket laryngoscope," which strikes us as excellent. It is beautifully simple, and must come into general use. He states, what we are prepared to indorse, that "every physician can learn with ten minutes' practice, to perform laryngoscopy in all ordinary cases." The instrument he recommends ought to be, and probably is, afforded at a figure very much below that asked for the cumbrous affairs now in use.—A foreign journal details a case of cancer cure by application of gastric juice produced by establishing a fistulous opening in the stomach of a dog. Time, about a month. Professor Schiff prefers for this purpose the pancreatic juice.—Compressed air is recommended as at once a sedative to circulation and respiration, and a tonic to the bronchial mucous membrane, in maladies of the respiratory passages. It is said to be an excitant of digestion also.—The Royal Danish Society of Science has offered among other prizes, one of \$170 for the best essay on the movement of the air in a system of ventilation. It is open to the competition of all nations and nearly all tongues, but must be handed in before October next.—There were fifty-eight boiler explosions in England during 1869, by which eighty-six persons were killed and one hundred and twenty-six injured.—The Zircon light is to be used in the Pneumatic Tunnel under Broadway. A single light will illuminate an entire car with great brilliancy. Two small cylinders containing compressed oxygen and hydrogen are carried on each car, and from them proceed tubes causing the gases to impinge on a pencil of zircon one-quarter of an inch long and one-eighth of an inch in diameter. It burns without any readjustment, and a single pencil will last three months. This

—One part of amber in one and a half parts of sulphide of carbon, is said to make an excellent cement. Apply the liquid with a brush, and press the surfaces together. It dries almost immediately.—The bisulphite of soda and carbolic acid are recommended in the treatment of trichiniasis. Nobody yet reports the use of chloral herein.—Prof. Wood, in his monograph on the hemp plant of North America, concludes it an excellent substitute for the foreign article, being both cheaply prepared and active. He uses the male seedling plants from Kentucky, and proved his faith in it by dangerous experiments upon himself. The active principle is a soft greenish resin, and is sufficiently active in quarter and grain doses.—Once more carbolic acid, $\frac{2}{3}$ grain in 20 minims of water, administered hypodermically, is said to cure intermittent.—In aphthæ, stomatitis, otorrhœa, etc., “A Country Physician” recommends in the *Bulletin*:

R	Acid gallic,	-	-	-	-	-	-	-	-	Diss;
	Glycerin,	-	-	-	-	-	-	-	-	5j;
	Liq. iod. co.,	-	-	-	-	-	-	-	-	℥ss;
	Aq. dest.,	-	-	-	-	-	-	-	-	℥ss;

M.S.—Apply with a camel's-hair brush several times daily.

—M. Vassin attributes five distinct varieties of cutaneous eruption to the continued use of the bromide of potassium.—M. Simon, of Hamburg, points out the occurrence of cerebral hæmorrhage and softening, after inhalation of the mixed gases arising from the combustion of coal.—Our learned correspondent Z. C. McElroy, M.D., writes to Prof. Potter (*Buffalo Medical Journal*, February) an explanation of the *modus operandi* of organic poison from the stand-point of his views of the physical basis of life.—A compromise of the questions involved between the line and staff officers of the navy is anticipated. The surgical position will be improved; it can scarcely be made worse.

THE Medical Department of the Howard University, D. C., (colored) held its commencement exercises March 3. This is the second year of the institution, and it numbers, in this department, some thirty students, white, mixed, black, and female. They have a substantial three-story brick building with French roof, occupied in common with the Freedman's hospital. The prop-

erty which the University now owns, free from debt, is worth \$1,000,000. Which reminds us that Senator Sumner, in his recent onslaught upon the Medical Society of the District of Columbia, urging the repeal of its charter, etc., committed, as it appears, a grave mistake. The "offences" he charges upon that society were really the doings of an entirely distinct voluntary "Association," which is not a chartered body.

It is to be regretted that the Massachusetts Senator would not retract his words, when the matter was fully explained to him. The officers of the Medical Society, however, have fully ventilated the subject in the Washington press.

ONE Dr. Donkin, of the University of Durham, (Eng.,) claims to have been the first to employ the milk diet for the relief and cure of diabetes. He must be pretty well along in years then, for we personally know of its use for this purpose more than quarter of a century ago, and even then it was spoken of as an old practice.

INHALATION of the aethereal tincture of valerian is recommended in hysteria.

MANY of the journals are "recurring to first principles," vindicating calomel and kindred mercurials. Several elaborate articles have recently appeared, claiming for this agent all the remedial powers claimed for it by the fathers. Thus we progress in circles. However, one hobby is about as good as another, and "often a great deal better."

THE famous Milwaukee surgical feat, extirpation of a kidney, has recently been accomplished by SIMON, at Heidelberg. It seems a country surgeon had performed ovariectomy on the patient, and had injured the right ureter, giving rise to a urinary fistula. After several unsuccessful attempts to cure the fistula, Simon cut in from the lumbar region, shelled the kidney out of its capsule, tied *en masse*, and cut it away. The patient was cured. Simon now proposes extirpation of the kidney for such diseases as echinococcus, abscess, hydronephrosis, and renal calculi. T. Spencer Wells, in commenting on this case, recommends treatment of renal cysts by tapping and drainage, and has advised

nephrotomy in some cases of renal calculi. The writer has at present under treatment an aggravated case of renal calculus, with frequent hæmaturia, colic and occasional pyelitis. What do our correspondents say as to our asking Professor Gunn to cut for it?

BROWN SEQUARD claims to have demonstrated in the spinal cord a special set of motor nerves, distinct from the voluntary motor, —the former being more in the lateral columns, and the latter more in the anterior. He thinks in epilepsy, these special fibres are the ones especially involved, and not the voluntary motor fibres. This is in harmony, he says, with Dr. Charet's statement, that inflammation (sclerosis) of the lateral columns of the spinal cord is invariably accompanied by muscular spasms.

A SEVERE influenza has been recently visiting London. "It usually begins quite suddenly with pain in the throat and ears, followed by shivering, *malaise*, constriction of the chest, sneezing and utter prostration. The temperature goes up to 102 degrees the first night, and there is some tendency to light-headedness. The *Medical Times and Gazette* says: "Bed, lemonade and beef tea, with an aperient pill and ammonia draught, the first day; next morning a five-grain dose of quinine, and half a pint of champagne at night, form the best way of dealing with this unpleasant visitor—*tuto, cito, et jucunde*."

DR. WHITE reports to the Boston Society for Medical Improvement several cases of Lupus successfully treated by Galvano-caustic. Dr. Hodges eulogized the same treatment, and also commends it in nævus and hæmorrhoids.

WE fear that our Boston friends, who discovered anæsthesia, do not mourn as they should over the death of the young lady to whom Sir James Y. Simpson recently administered chloroform.

DR. BARCLAY (*Dublin Press*) thinks that two or three drops of chloroform taken three or four times a day, is an admirable solvent for biliary calculi.

PROF. HOWE (*Eclectic Journal*), reports successful treatment of *mania a potu* hypodermically. The remedies used were in these proportions: R. Water $\frac{z}{iv}$; morphia, gr. ij; atropia gr. j; M. S.—Inject, hypodermically, from thirty to sixty drops.

DR. FERRAND (*Edinburgh Journal*) urges the possibility of securing the effects of iodide of potassium applied in the dry form externally. In one case he secured iodism by putting on his patient a shirt previously dipped in a solution containing two drachms of the iodide, and then dried. After three days this shirt was replaced by another prepared in the same way; but on the fourth day the iodic symptoms occurred.

THE National Medical Society lately organized at Washington, "embraces all colors, sexes and sects in medicine," which he of the *Nashville Journal* ethnologically christens "Organic Mosaic."

RHIGOLENE is not explosive, but it should be kept in a cool place; or when it is wanted for local anæsthesia, it will be found to have evaporated.

THE *Detroit Journal* says that chloral is most conveniently administered in the form of a mixture containing not over forty grains to the fluid ounce, in simple syrup, flavored with peppermint. As chloral is getting cheaper, of course every body will try it. Confidence, in medicine at least, is not a plant of slow growth, as was demonstrated the other day by a physician who said that all that was needed to cure a certain patient was to pass a bougie every day and take chloral. A week after, "our Moses" took from that patient's bladder stones enough to start in the business of street paving.

PROF. WORMLEY, of Sterling Medical College, has isolated and described *gelsemia*, the true, active alkaloid of gelsemium.

DR. MCGRAW, of Detroit, recommends the use of Fl. Ext. Belladonna, in five-drop doses *ter die*, several days before expected labor. The belladonna, or stramonium suppositor is better. — The *Medical Investigator* don't believe that *pulsatilla*, third trituration, will cause breech presentation, and consistently says: "The use of *pulsatilla* in mal-presentations, as a

substitute for turning, we shall choose to regard worse in the breach than in the observance." *We* think so.

THE same journal reports Scarlatina still prevailing in Chicago. "*Calc. C.* is very frequently indicated. When the eruption is tardy in making its appearance, and cerebral symptoms are prominent, *Apis* has proved efficient. *Bell.*, strange to say, has not been often indicated." *We* are surprised, also, about *Bell.*

HAS *capsicum annuum* any real "Homœopathicity to whooping cough?"

THE "first attenuation" of Petroleum being recommended for sea-sickness, the *Medical Gazette* wants to know if it is on the principle that "*rock oil*" is an appropriate "*similium*" to still the rocking of the waves. Evidently the *Gazette* man "makes light" of the petroleum. "No levity."

PROF. CHISOLM (*Baltimore Medical Journal*) discards dressings after the incision for *fistula in ano*. Immediately after cutting, he applies, with a camel's-hair brush, or sponge, the liquid persulphate of iron over the entire surface. If much hæmorrhage occurs, he introduces, for a few hours, a dossil of lint soaked in the solution. Nothing more is needed save ablutions for cleanliness, and the patient is not often compelled to keep in bed, or in the house.—In the olden time, *Tulpius* and others, believed anal fistula "very high, either to the Loins, or the *Vertebræ* of the Breast, or sometimes to the Shoulders; whose inaccessible *Caries* the tortuous windings of the *fistula* does hinder from being searched with a probe, which also hinders injections, designed to cleanse the Ulcer, and does exclude the Hand, which might take out the vitiated bone. Which, nevertheless, not being timely taken away, the Patient dies before his time, and the *fistula*, deriving its original from a remote *Caries*, does obstinately resist the Physician's cure. Whose lips though you clip open and amplate, (which yet is very good in cutaneous fistula's,) nevertheless you will lose your labour, and you can never come to the farthest end of these sinuous windings, from whence so many branches, and so frequent rivulets descend by muscles and tendons, which lie deep, that though a Probe be never so dextrously put into such a tortuous *fistula*, yet it can never reach or remove the *Caries*, that is the cause of a continual *fistula*."

Cerebro-Spinal Meningitis.

[Which of our correspondents will undertake to respond to this?—ED.]

SAN JACINTO P.O., Houston Co., Minn., Feb. 20, 1870.

Messrs. ALLEN and HAY, M.D.—*Dear Sirs:* Permit me to suggest for your consideration the importance of enlightening the profession of medicine on the subject of that terrible disease, cerebro-spinal meningitis. I have seen five die with what I consider this complaint. Will you please to lay before the profession, *in extenso*, all that is known on the subject; causes, progress, lesions (post-mortem), diagnosis, prognosis and treatment. How distinguished from typhoid fever in the *beginning*. This is *most* important; then the steps taken, tell for or against all the way through.

Respectfully, G. JAS. SHELDON, M.D.

American Medical Association.

Office of Permanent Secretary—Wm. B. Atkinson, M.D., 1400 Pine st., S.W. cor. Broad, Philadelphia.

The twenty-first annual session will be held in Washington, D.C., May 3, 1870, at 11 A.M. The following committees are expected to report:

On Cultivation of the Cinchona Tree—Dr. Lemuel J. Deal, Pennsylvania, chairman. On the Cryptogamic Origin of Disease, with special reference to Recent Microscopic Investigations on that subject—Dr. Edward Curtis, U.S.A., chairman. On the Doctrine of Force, Physical and Vital—Dr. John Waters, Missouri, chairman. On Variola—Dr. Joseph Jones, Louisiana, chairman. On the Relative Advantages of Syme's and Pirogoff's mode of Amputating the Ankle—Dr. G. A. Otis, U.S.A., chairman. On a National Medical School—Dr. F. G. Smith, Pennsylvania, chairman. On Commissioners to aid in Trials involving Scientific Testimony—Dr. John Ordronaux, N.Y., chairman. On the Climatology and Epidemics of Maine, Dr. J. C. Weston; New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. H. I. Bowditch; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engleman; Alabama, Dr. R. F. Michel; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. C. Hughes; Michigan, Dr. Abm. Sager; Ohio, Dr. T. L. Neal; California, Dr. F. W. Hatch; Tennessee, Dr. B. W. Avent; West Virginia, Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey; Virginia, Dr. W. O. Owen; Delaware, Dr. L. B. Bush; Arkansas, Dr. G. W. Lawrence; Mississippi, Dr. W. Compton; Louisiana, Dr. L. T. Pimm; Wisconsin, Dr. J. K. Bartlett; Kentucky, Dr. J. D. Jackson. On Veterinary Colleges—Dr. Thomas Antisell, D.C., chairman. On Medical Ethics—Dr. Lewis A. Sayre, N.Y., chairman. On American Medical Necrology—Dr. C. C. Cox, Maryland, chairman. To Memorialize State Medical Societies—Dr. N. S. Davis, Illinois, chairman. On Nomenclature of Diseases—Dr. F. G. Smith, Pennsylvania, chairman. On Medical Education—Dr. T. G. Richardson, Louisiana, chairman. On Medical Literature—Dr. J. J. Woodward, U.S.A., chairman. On Prize Essays—Dr. Grafton Tyler, D.C., chairman.

Voluntary communications will be presented by Dr. John Curwen, Pennsylvania, on the Proper Treatment of the Insane; Dr. Nathan Allen, Massachusetts, on the Physiological Laws of Human Increase.

Secretaries of all medical organizations are requested to forward lists of their delegates as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements. W. B. ATKINSON.